



A COMPLETE
HISTORY
OF
DRUGS.

Written in FRENCH

By Monsieur **POMET**,
Chief DRUGGIST to the late French King LEWIS XIV.

To which is added what is farther observable on the same Subject, from
Mess. **LEMER**Y and **TOURNEFORT**,

Divided into Three CLASSES,
VEGETABLE, ANIMAL, and MINERAL;
With their Use in
PHYSIC, CHEMISTRY, PHARMACY,
And several other ARTS.

Illustrated with above Four Hundred COPPER-CUTS, curiously done from the Life; and an Explanation of their different NAMES, PLACES OF GROWTH, and COUNTRIES where they are produced; with the Methods of distinguishing the Genuine and Perfect, from the Adulterated, Sophisticated, and Decayed; together with their VIRTUES, &c.

A WORK of very great Use and Curiosity.

Done into *English* from the ORIGINALS.

The FOURTH EDITION, carefully corrected, with large ADDITIONS.

L O N D O N,

Printed for J. and J. Bonwicke, S. Birt, W. Parker, C. Hitch, and E. Wicksteed.

M DCC XLVIII

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[Faint handwritten text, possibly "Good"]



The DEDICATION of the former Editions
To Sir *HANS SLOANE*.

S I R,

I THINK myself under many Obligations of offering this Undertaking to you, which I should be much wanting to myself, if I did not acknowledge. The first is, That you have been a very generous Encourager of this Design, not only by recommending the Work, but in assisting the Performance; which is a Favour I beg Leave to thank you for, as well as the kind Present you made me of your *Natural History of Jamaica*. And though these were Inducements, they were not the real Motives that made me think this Work could come to none so properly as yourself; but it was the Consideration, that you are, without the least Tincture of Flattery, the only Person of the Faculty in these Kingdoms, who of late Years hath made the *Materia Medica* your Study: So that it is hard to say, whether your Discoveries in the Theory of Medicine, or your judicious Improvements of those Discoveries in the Practice, have exceeded.

It would look vain in me to attempt the Characters of my Authors, to one who is so much better acquainted with them, and whose single Recommendation would be sufficient to make the Publick value their Productions: But I flatter myself you will forgive me if I briefly inform you of the Method used in compiling and translating this Work, wherein I hope you will be of Opinion I have done my Authors no Injustice. For, in the first

Place, I have taken Monsieur POMET for my Text, making use of the Liberty of throwing out Repetitions, or whatever else was foreign to the Purpose, or better described by others, especially Messieurs TOURNEFORT and LEMERY, whom you know well to be more accurate and concise. And in the next Place, I have added several Things to Monsieur POMET, wherein he was erroneous in Description, Dose, or Choice of Drugs, which were much better known in these Countries, and more in Use amongst us. And, indeed, I have pursued the same Rule with Monsieur LEMERY, but with more Caution ; so that it made this a Work of more Time than I expected when I first engaged in it. And yet perhaps I have not come up to the Taste of some curious Gentlemen, who are more accurate in Botany than I can pretend to ; therefore I throw myself entirely upon your Favour, because I am assured you have too much Candour for Industry, and Concern for useful Knowledge, not to pardon small Faults, for the Sake of many Things that may be commendable and instructive, and that otherwise would not be so readily ushered into the World.

And though it is certain, that the Knowledge and Choice of Drugs is one of the most useful and important Parts of Physick, yet it has been the most neglected of any to this Day ; and it is not easily apprehended how much the Publick suffers in the Sale which is daily made of I know not what sophisticated and decayed Drugs, which are not capable of producing the Effects that are designed by them, and expected from them, either to restore or preserve the Health of Mankind. We may yet be more surprized at the fatal Mischief that flows from Mens Ignorance in the common Choice of Drugs ; and that nothing is more frequent in Druggists and Apothecaries Shops than adulterated Medicines, which deserve not least the Tittle of those pompous Names, by which they enhance the Prices of them.

Hence

DEDICATION.

v

Hence, *Sir*, you may plainly see our Author's Designs were to expose the ill Practices of those Men who did so much Prejudice to the Profession of Physick, by rendering the Practice precarious, and setting a greater Value on a decayed Drug, or Composition of the Shops, than on the Life or Health of one of their Fellow-Creatures: Therefore, as one can scarce discover their Works of Darkness without suffering by the Malignity of their Tongues, who so undeservedly make a Gain of People's Credulity, I stand in need not only of an Advocate but a Protector: And since every one knows that you are universally skilled in all the most curious and useful Secrets of Nature, either in the Vegetable, Animal, or Mineral Kingdoms, whatever is here treated of in the following Books, your Travels into those Countries Abroad, where many of them are produced, and your Diligence in furnishing your *Museum* at Home, from all Parts of the World, have made you intimately familiar with; so that no Person but will allow your Approbation a sufficient Sanction to this Work, and Protection to the Compiler thereof, who is, with the utmost Esteem,

S I R,

Your very Humble

Servant to command, &c.

P R E F A C E

T O T H E

F O R M E R E D I T I O N S.

THE Knowledge of simple Drugs is a Study so agreeable, and so exalted in its own Nature, that it has been the Pursuit of the finest Genius's in all Ages. Several Princes have applied themselves to it with a great deal of Satisfaction to their own Minds, and Improvement to the Publick, and to these we are obliged for the first Essays of Medicine. It is also an indispensable Knowledge to all who are concerned in Composition, especially Apothecaries; for which Reason they ought to begin with this Study, before they undertake *Pharmacy*, else they can never prepare any thing with Exactness, which is the occasion of so many gross Errors that attend the Business, to the great Prejudice of the Patient: They ought to know, as well as the Druggist, from whence every Drug comes, because different Climates encrease or lessen much their Virtues; they ought to distinguish them by their Names, their Figures, their Substance, their Touch or Feeling, their Weight or Lightness, their Colour, their Smell, their Taste; and to take particular Care that those which come from foreign Countries be not counterfeited or adulterated: For the Merchants, through whose Hands they pass, are sometimes too covetous of extravagant Gain, so that they sophisticate and counterfeit so well, that it is a hard matter to discover the Cheat, if we have not been very conversant, or well acquainted with those Drugs before. Druggists themselves are sometimes deceived in buying great Quantities of false Drugs for good ones, and they then sell them so again; for which Reason it is very necessary that the Apothecary should be well skilled in the Knowledge of the True from the False, which is gained by a continual Trade in them, and a Frequency of seeing them. A Druggist ought to apply himself as much as possible to get Drugs at the first hand, and to know the Places of their Growth, and their true Natural History: But most Books that have been written hitherto, have told us nothing but Fables on this head.

The Publick will find themselves much indebted to Monsieur *Pomet*, for the great Number of curious and useful Remarks they will meet with in this *General History of Drugs*; which is farther enriched by the Discoveries of a great many Things that were before in the Dark, but since brought to Light, by the Labour and Industry of him, and the more accurate *Lemery*: But Interest, we see, prevails upon Curiosity, since we meet with very few Merchants that will employ any

Part of their Time to instruct themselves in these Affairs, which they are not persuaded are any ways necessary to their Business.

Besides, this Work is not only useful to those who profess Physick, and who will put nothing in the Composition of Medicines that they prescribe, except choice Drugs, but likewise it is serviceable to Students in Pharmacy, to Druggists and Apothecaries, who may improve themselves by what they will find in this Work, from whence they may learn to make a right Judgment of what is true or false in the Use or Trade of Drugs; since People that compose Medicines ought to know, that what they buy will answer the Ends they propose: Besides, there are several Artists and Tradesmen who make use of Drugs, to whom it is necessary, and of great Importance to the Publick, that they should not be cheated or imposed on, as Surgeons, Goldsmiths, Painters, Dyers, Farriers, &c.

I am persuaded, that those who read this Work will be satisfied, that they never saw one Treatise of Drugs so complete; for here is not only collected what may be found scattered in a great many Authors, but a great many Things that were unknown before *Pomet's General History of Drugs*, or at least very few of them were ever taken notice of by any former Author; for he acknowledges to have abundance of Materials given him by *Monf. Tournefort*, and several others of his Friends, who made it their Business to assist him with all the new Discoveries they could meet with. And though this Work is not swelled into many Volumes, of much larger Size than the two present, yet they contain twice as much as is in *Pomet*, besides the Additions that are necessary to the Text from *Lemery*; and this considered, together with the Number of Figures, and the neat Performance of them, which are nothing inferior to the Originals, renders this one of the cheapest Books that has appeared of latter Years; which has been contrived for the Good of the Publick, many of the Figures being brought into one Plate, on purpose to prevent the Book from swelling to too large, and too exorbitant a Price, and so destroying the Usefulness of the Design, and the Sale of the Book together.

All the Drugs herein mentioned, have either their proper *Latin* Names, or the Names given them by the Country from whence they are brought, with their Etymology; where most pertinent, their Description and History taken also from *Mr. Lemery's Universal Treatise of Simple Drugs*; the judicious Author whereof has endeavoured to inform himself both from ancient and modern Authors, and the Relations of several Travellers, of whatever could be known concerning the Substances and Principles of which each Drug is composed, and its Quality, and as succinctly as possible, to give an Idea of the Thing treated of, that might be satisfactory. Now all Drugs are taken from Animals, Vegetables, and Minerals, their Parts, and what proceeds from thence; as their Hair, Nails, Horns, Milk, Blood, and Excrements. Under Vegetables are comprehended Trees, Shrubs, and other Plants, with what comes from thence; as Roots, Barks, Flowers, Fruits, Seeds, Mushrooms, Mosses, Gums, Rosins, Pitches, Turpentine, and Balsams.

Under

Under Minerals are understood Minerals, Metals, Marcasites, Stones, Earths, and Bitumens.

All Animals, according to the most probable and most received Opinions, come from Eggs, and are there enclosed, as it were in Abridgment, till the Seed of the Male penetrate their Covering, and stretches them sufficiently that they are ready for hatching: There enter into their Vessels a chylous Juice, which being pushed forwards by the Spirits, circulates through the whole Habit of the little Body, nourishes and dilates it by little and little, which makes what we call Growth. This Circulation, repeated several times, makes the nutritious Juices so refined and attenuated, that they take a red Colour, and are converted into what we call Blood. This natural Operation has a great Resemblance to several chymical ones, by which, in attenuating and dissolving the sulphureous or oily Substances, we can make a red Colour, which, notwithstanding, has a great deal of Difference: For example, if we boil in a Matrafs one Part of Chyle or Milk, with two Parts of Oil of Tartar, *per Deliquium*, the white Liquor will become red, because the Salt of Tartar being rarified, dissolves and exalts the unctuous Part of the Milk, and reduces it into a kind of Blood. If we boil together in Water one Part of common Sulphur, and three Parts of Salt of Tartar, the white or yellowish Liquor that was before acquires a red Colour, according to the Quantity of the Sulphur dissolved. If we digest upon the Fire Flower of Sulphur in Spirit of Turpentine, the Liquor gains a red Colour.

The Circulations that are made perpetually in Animals, exalt so much their Substances, and render them so disposed for Motion, that the Principles which arise from thence are almost wholly volatile. But indeed these Principles are not equally volatile in all Animals: For example, Fish afford less volatile Salts than terrestrial Animals: The *Scorpion*, the *Crab*, and the *Eel*, yield less than the *Viper*; *Earth-worms* and *Snails* afford less than *Serpents*; *Ivory* less than *Hart's-horn*; and so of the rest.

The different Degrees of Volatility that are in Animal Substances, give them different Virtues one from the other; so those which have very volatile Salts, are usually reckoned cephalick and diaphoretick; as the *Viper*, *Human Scull*, *Hart's-horn*, *Goat's-blood*, *Elk's-claw*; because the Matter being heated in the *Viscera*, pushes forth their Salts into the Brain, and by the Pores of the Body. Those whose Substances are less volatile have an aperitive Virtue, such as is to be met withal in *Hog-lice* and *Crawfish*; because the Salts of these Animals being heavier, are more inclinable to precipitate and open the urinary Passages.

Every Plant arises from its Seed, and is confined in miniature as in an Egg, after the same manner as Animals, the Earth becomes a Matrix to the Seed, it softens it and extends the Bark, opens the Pores, and by a nitrous Fluid it is penetrated and unsheathed from the Husk, so that the Parts of the little Plant are stretched,

stretched, that were before wound or locked up together confusedly, and then this small Plant begins to appear upon the Surface of the Earth, and the nutritious Juice or Sap circulates in the Fibres that do the Office of the Veins, Arteries, and Nerves; they dilate, extend, and grow to a certain determinate Size, limited and appointed by the great Author of Nature.

A Plant draws its principal Nutrition by the Root, because the Pores thereof are better disposed than others, for receiving in the Juice from the Earth. This Juice, in circulating in the Vessels of the Plant, purifies itself, is rarified, exalted, and brought to perfection after the same manner as the Chyle and the Blood acquire their Perfection by Circulation. Then the more exalted and spirituous Parts of the Juice, which may be called the animal Spirits of the Plant, are imployed upon the Flowers and Fruits; the less subtle Parts supply Nourishment for the Stalk, the Branches, and the Leaves; the grosser Parts still congeal or coagulate into Gums, Rosins, and Balsams: Those that are the grossest of all, produce an external Bark. Though all the Plants of the Earth receive their Nutrition from one and the same Spring, they, notwithstanding, every one of them, acquire different Qualities, occasioned from the Diversity of Fermentations and other natural Elaborations, that are produced by the Texture or Disposition of their different Fibres. We may distinguish Rosins from Gums, in that Rosins are much fatter, and that they dissolve, consequently, much easier in Oil.

The Origin of Minerals is different from those of Vegetables and Animals; this proceeds from the Congelation of acid or saline Waters charged with such Matters as will dissolve in the Earth. Metals are produced from a greater degree of Concoction, a longer Digestion, and closer Union than the Minerals, which are separated or divided from the grosser Parts in the Ores, after the same manner as Gold and Silver separate themselves from their Metals in the Cupel. All Ores are not in a State or Condition of producing Metals, for it is necessary there should be a Disposition and natural Heat capable of raising extraordinary Fermentations and Elaborations; and high Mountains are usually the properest Places for these Productions, because the Heat therein contained is more regular and exact than elsewhere.

It is not Chance only that conducts us to the Discovery of metallick Mines, but those who apply themselves that Way, observe or take notice of several Circumstances which direct them to the Places where they may be found: For example, When on a Mountain, or in the Clifts and Breaches of Rocks, they meet with Marchasites, and small heavy Stones of a Mineral Kind, or that they perceive on the Surface of the Earth several Mineral Veins; these are Signs that there is something to be found, that is likely to answer their Expectations, and that they may be assured of Success.

When in certain Streams or Rivulets there is seen a sort of Sand of little Pieces of Marchasite of some Mineral, there is a Sign that there is some metallick Mine near the Place; for these metallick Bits are washed off, and conveyed by the Current of the Water that flows usually from the Bottom of some Hill; so that it runs back again towards the Fountain-head, insomuch that if you pursue these small Pieces of Marchasite, they will bring you to the Place where the Mine is.

When the Aspect or Figure of a Mountain is rough and wild, the Earth is barren, naked, and without any kind of Plants, or that only some particular Kinds are produced, which are almost withered and dry; these are Signs that there are Mines in this Mountain, because the great Barrenness of the Surface was occasioned by nothing else but the mineral Vapours, which consume the Roots of the Plants; though it does not always happen that mineral Places are barren, there being very many that are covered with great Variety of Herbs. When we see a very clear Water flow from a Mountain that has a mineral Taste, it is a Sign that the Place abounds with some kind of Métal or Mineral; for those sort of Places are usually supplied with a great deal of Water, which give great Disturbance to the Workmen, it being necessary to drain off the Water before you can search for the Metal.

When we are very certain, by several Signs or Observations, that any Hill or Mountain contains in it some Mine of Metal, we begin to sink or dig a Pit at the lower Part or Foot of the Hill, in order (as the Miners call it) to carry the Level, whereby the Waters may run off of their own accord, and without the Assistance of Engines; and thereby they may be able to come at the Deep, where the largest and richest Part of the Metal lies. We must take notice, that the metallick Matter being as yet stony in the Mine, divides itself into several Veins or Channels, that represent the several Branches of Trees, or the Arms of a River. Metals differ from other Minerals in being more malleable, whereof there are seven; to wit, Gold, Silver, Iron, Tin, Copper, Lead, and Quicksilver; the last is not malleable, but will amalgamate with any of the others, and therefore is by some called a half Metal, though others believe it to be the Seed of all Metals.

The Astrologers and Alchemists join in their Opinions herein, and affirm this as an uncontestable Truth, that there is a great Correspondence between the seven Metals and the seven Planets in their Influences, which flow the one from the other, and serve reciprocally for their Nutrition. And though this Opinion is without any Foundation, it has nevertheless many Followers, notwithstanding their finest Reasonings are but *gratis dicta*; for, excepting the Sun and Moon, there is not the least shadow of Probability, how any of the rest should communicate any Influence to any thing that grows upon this terraqueous Globe, especially subterraneous Bodies, where neither Sun nor Moon seems to have any Dominion.

A great

A great many Physicians and Apothecaries think it sufficient to answer the Ends of their Profession, that they know the most common Drugs in Use, without giving themselves any further Trouble: But nothing is a greater Obstruction to the Progress and Advancement of Medicine than such a lazy Notion, which gives a Check to all Enquiries into the Secrets of Nature, and prevents the Discovery of an infinite Number of excellent Medicines that are unknown to us. We see that every Age has brought to light some new Drugs, and we had never known the chief Part of the best Medicines in Use among us at this Day, if the Chemists had not brought them out of the Fire, from such Metals and Minerals as the Ancients believed not only useless in Physick, but pernicious to Health. How should we have met with the *Bark*, *Ipecacuana*, &c. which produce such extraordinary Effects, if the Botanists had not carried their Enquiries into the New World? And the *Materia Medica* had never been so copious as it is now, if those who have made so many valuable Discoveries had contented themselves with such Drugs only as served their Predecessors? We likewise see, that such Physicians as practise Physick with the most Success, are such as have applied themselves most to the Knowledge of Drugs; as we have an eminent Instance in *Monf. Fagon*, First Physician to the *French* King; and some of our own Nation, who are, and have been, the greatest Ornaments to the Profession of Physick, as well as the Study of Botany, as *Dr. Morison*, *Dr. Grew*, *Dr. Sloan*, *Dr. Woodward*, *Mr. Petiver*, and others: Therefore all those who apply themselves to the Composition of Medicine, ought seriously to enquire into the Knowledge of Drugs, and to penetrate into their secret Virtues, it being certain there is not one of them that has not in it some specifick Quality for the Cure of Diseases. It is pity there are few Persons whose Leisure and Fortune will give them an Opportunity of applying all their Time to this Business; but I am persuaded, that any Physician or Apothecary that would use a little Industry this way, might, in the Course of his Life, discover the particular Virtues of at least some one Drug; and this would, in Time, enrich the Practice of Physick with a great many more Simple Medicines, that are surer, safer, and more efficacious than those we use at this Day.

T H E
P R E F A C E of the E D I T O R
O F T H I S
F O U R T H E D I T I O N.

THE Author of this useful Work appears to have been a Man of great Candour and Openness in the Discovery of every thing he knew regarding his Subject; and, what is perhaps a Merit more than equal to that or any other, in the Author of a Treatise of this kind intended for general Use, a Person of the strictest Probity; to this he had added an uncommon Industry and Application to his Business, as a Druggist, for a long Series of Years, and by being himself daily conversant among the Objects he had to describe to others, he seems to have made himself much better acquainted with the external Appearances and Differences of Drugs, and the various Accidents they are subject to, than any Author who had wrote before him. With these Qualifications, the World could not but expect a valuable Work from him, on a Subject he so well understood; and his Countrymen, when the Book appeared, declared that he had not fallen short in it, of what they expected from him: Indeed we find him every where talking as if he had the Substances treated of before him; his Descriptions are clear, succinct, and distinctive; his Cautions against Deceits are not calculated from the Figments of a fertile Invention, but given from the Memory of Sophistifications by which himself had, at some time or other, suffered: and his Directions how to know the good from the bad in every Species, are a Lesson that every Druggist, Chemist, and Apothecary, ought to have eternally in Memory.

If the Work has, among us, been accused of some Inaccuracies, it is but Justice to the Author to observe, that it was in many Cases the *English* Translator, and not he, who was chargeable with them; and if there are some Instances in which we can perceive Errors in his Accounts of the Drugs, it is owing to the Discoveries made in later Times, of Things not so much as suspected by the best Judges at the Time of his publishing this Work.

In this Edition, the gross Errors of the Translator are amended, and the Author is set in the just Light he deserves, and his Sense rendered clear where it was before mistaken or left obscure : And as the Improvements made in all Parts of natural Knowledge since his Time have been very great, whatever might seem necessary for the farther instructing the young Student in the true Nature and Properties of the Body described, is here added at the End of the Chapter, from the Writings of the *French* Academicians, of *Reaumur* and *Geoffroy*, in their particular Treatises, from our own *Dale*, and from such others as have given Lights into the Subject unknown to these ; and sometimes from Accounts or Observations later than the Works of any of them.

The Reader will not be displeased to find, that what is added of this kind is not spun out into an unnecessary Length, by Observations foreign to the Intent of the Work ; the Design not being to enter into the Detail of all the Particulars, in regard to each Subject, as a Matter of Science, or to give Botanical, or other compleat Treatises on the Bodies under Consideration ; but to point out the Nature and Properties of each as a Drug ; that is, as it becomes the Subject of this History ; with just enough of its Characteristicks or Description, for the distinguishing it from other Things of the same kind. Those who want to be further informed of the general History of the Subject, are referred to the Page or Chapter of some of the Authors of the greatest Credit who have treated more largely of it.

The *English* Translation having been made from the first Edition of the Original, it has been judged necessary to add here the more material Part of what was afterwards added to it in the succeeding one, published by the Son of the Author ; and as there are some few Drugs in use among us, which by Inadvertency were passed over in silence by this Author, there are added short Accounts of them, by which they may be known when genuine, and by which the Sophistifications, not less frequent in the Shops of *London* than in those of *Paris*, may be avoided.

JOHN HILL.

A N

A C C O U N T

O F T H E

NAMES of AUTHORS

cited in this Work.

A.

ACOSTA, (*Christopher*) an *African* Physician and Surgeon, who made a Treatise of Drugs and Medicines in the Year 1582, which was translated into *Latin*, then into *French*, and printed at *Lyons* in *Octavo*.

Adversariorum Opus, done by *Peter Pena* and *Matthew Lobel*, both Physicians. This Book was printed at *London* 1570, at *Antwerp* 1576, and reprinted at *London* 1605, in *Folio*.

Agricola (*George*) of the Rise and Causes of subterraneous Productions. Book the Fifth, of the Nature of those Things which spring from the Earth. Book the Fourth, of the Nature of Fossils. Book the Tenth, of old and new Metals. Book the Second, *Bermannus*, or a Dialogue of metallick Affairs, being a *German* Interpretation of metallick Terms.

Aldinus: An exact Description of several scarce Plants, contained in the *Farnesian* Garden at *Rome*. Printed there 1625, in *Folio*.

Aldrovandi, (*Ulyssis*) *Dendrologia*, printed at *Bononia*, in *Folio*.

Alpinus, see *Prosper Alpinus*.

Amatus Lusitanus, upon the five Books of *Dioscorides*; to which is added the Names of Plants in several Languages; printed at *Strasburgh* 1554, in *Quarto*.

Ambrosinus Hyacinthus, his *Phytologia* of the Garden at *Bononia*, or the first Tome of the first Part of Plants; printed at *Bononia* 1666, in *Folio*.

Anguillaria, (*Alofius*) Third President of the Garden at *Padua*, his Opinion of several Plants; a small Work divided into fourteen Parts; with the Works of *John Marinel* in *Italian*: To which are added two Figures, one of the *Chamaelian-Thistle*, and the other of the *Tree House-leek*; printed at *Venice* 1691, in *Octavo*.

Apuleius Platonicus, of the Virtues of Herbs, joined with a Demonstration of the Herbs to every single Sign of the *Zodiack*, and also of the errattick Stars, or such as are not fixed; printed at *Paris* 1528, in *Folio*.

Barbarnus,

B.

Barbarus, (*Hermolaus*) his five Books of Additions upon *Dioscorides*; printed at *Cologne* 1530, in *Folio*.

Bellonius: These Works are translated by *Clusius*, and placed in the second Volume of Plants, printed at *Antwerp*. There are, besides, printed at *Paris*, several Treatises of the same *Belon*, of coniferous and ever-green Plants, in *Quarto*. Of the wonderful Excellency of the Works of the Ancients, in *Quarto*. Of embalming the Dead, in *Quarto*.

Benzoni, (*Hieronimus*) his History of the New World, rendered into *Latin* by *Urbanus Calvatones*; printed at *Geneva* 1600, in *Octavo*.

Boccones, (*Paul*) his Figures and Descriptions of choice Plants; printed 1674.

Boetius de Boot of *Bruges*, Physician to the Emperor *Rodolph* the Second, his History of Gems and Stones; printed at *Leyden*.

Bontius, (*James*) a Physician of *Batavia*, who writ six Books of the Natural History of the *East-Indies*, but being prevented by Death left them unfinished: Afterwards *William Piso* reduced them into Order, illustrated and published them together with the Natural History of the *West-Indies*; printed at *Amsterdam* 1658, in *Folio*.

Botanicum Monspeliense, the *Montpellier* Botanist; printed at *Leyden* 1676, in *Octavo*.

Breynius, (*James*) of *Exoticks*, &c.

Brunfelsius, (*Otho*) his *Latin* History of Simples, with Cuts, in three Volumes; the first published 1530, another in 1531, and a Posthumous Work in 1536; printed at *Straßburgh*.

C.

Caspar Bauhinus's Pinax, or Store-house of Botanical Rarities; printed at *Basil* in 1623, and reprinted at the same Place, with some Alterations, in 1671, in *Quarto*.

Cæsalpinus, (*Andreas*) *Aretinus*, Professor in the University of *Pisa*, his sixteen Books of Plants; printed at *Florence* 1583.

Camerarius, upon the *Epitome* of *Matthioli*; printed at *Frankfort* 1586, in *Quarto*.

Camerarius, on the Medical and Philosophical Garden; published at *Frankfort* 1588, in *Quarto*.

Cardanus, (*Hieronimus*) of the Variety of Things; seventeen Books, printed at *Basil* 1581, in *Octavo*.

Castor Durante's New Herbal; printed at *Rome* 1585, and at *Venice* 1684, in *Folio*.

Clusius, (*Charles*) his Appendix of the History of Plants, or his Description of several Roots as yet unknown; printed at *Antwerp* 1611, in *Folio*.

Clusius, of Exotick Plants, ten Books; printed at *Antwerp* 1605, in *Folio*.

Clusius's History of scarce Plants; printed at *Antwerp* 1601, in *Folio*.

Clusius's History of several rare Plants observed throughout *Spain*.

Clusius's History of several scarce Roots observed throughout *Pannonia*, *Austria*, &c.

Columnæ, (*Fabii*) *Phytobasanos*, with Cuts; printed at *Naples* 1592.

Two Parts of the same Author, of the less known Plants; the first of which contains One hundred sixty-one Figures, printed at *Rome* 1616; the other, forty-four Figures, printed at the same Place 1616.

Cordus, (*Valerius*) his Annotations on *Dioscorides*.

The History of Roots by the same Author, in four Books, with several Cuts from *Tragus*, and some new ones added by *Gesner*.

A *Sylva* of Observations, which were likewise published together by *Gesner* at *Straßburgh* 1561, in *Folio*.

A Dispensatory of the same Author.

Cornutus, (*James*) a *Parisian* Doctor, his History of the Plants of *Canada*, and others not known before; printed at *Paris* 1635, in *Quarto*.

Cornarus,

Cornarus, (*Janus*) who undertook *Dioscorides*, and added Cuts to every Head; printed at *Basil* 1557, in *Folio*.

Cortusus, (*James*) *Anthony*, a Senator of *Padua*, and President of the Physick-Garden there, and who published nothing but a Catalogue of the *Padua* Garden, with the *Area* or Plans of the same; printed at *Venice* 1591, in *Octavo*.

Costeus, (*John*) concerning the whole Nature of Plants, in two Books, printed 1578, in *Quarto*.

Annotations of the same Author upon the *Museum*, with the Works thereof; printed at *Venice* 1570, in *Folio*.

Crescentius, (*Peter*) of *Bononia*, of the Parts of Agriculture, with the Nature and Usefulness of Plants; printed at *Basil* 1548, with some Cuts.

D.

Dalechamp's History of Plants in two Volumes; printed at *Lyons*, in *Folio*.

De la Duquerie, (*John Baptist*) his *Lexicon Medico-Etymologicum*.

Dioscorides of the *Materia Medica*, five Books in *Greek*, of which there are various Editions extant in *Greek* and *Latin*, with the Interpretation of *Marcellus Virgilius*, *Goupius Affulanus*, *Johannes Ruellius*, *Johannes Coñarius*, *Johannes Antonius Saracenus*, and others.

Six Books of the said *Dioscorides*, with *Ruellius's* Notes, and small Cuts 350; to each Chapter of which is added compendary Annotations of the second Edition: Also thirty Figures of Roots not before delineated; by *James Dalechamp*; printed at *Lyons* 1552, in *Octavo*.

Dodonæus, (*Rembertus*) of *Mechlin*, Imperial Physician, his History of Roots, in thirty Books; printed at *Antwerp* 1616, in *Folio*.

Dodonæus's French History of the same, by *Clusius*.

The *Belgick* History, by the same Author.

F.

Furcius Cordus's *Botanologicum*, or Discourse of Botany, by way of Dialogue; printed at *Cologne* 1534, in *Folio*.

The Garden of *Eystettensis*, described by *Basilius Beslerus*; printed at *Norimbergh* 1613, in *Folio*.

Fracastorius's Works; printed at *Lyons* 1590, in *Octavo*.

Fragosus, (*John*) Physician and Surgeon to the King of *Spain*, his History of Aromaticks, Fruits, and Simples, that are brought from both the *Indies* into *Europe*; published by *Israel Spachius*, a Physician of *Straßburgh*, and printed at the same Place 1610, in *Octavo*.

Fuchsius's Commentaries on the History of Roots; printed at *Basil* 1542, in *Folio*.

G.

Galenus, (*Claudius*) of *Pergamus*, the most eminent after *Hippocrates*.

Garzias ab Horte, Physician to the Viceroy of the *Indies*, his History of Aromaticks and Simples that have their Growth in *India*, digested into an Alphabetical Order, and found writ in the *Portuguese* Language, by the way of Dialogue, but contracted by *Clusius*, and rendered into *Latin*. This Book was translated into *French* under the Title of *The History of Drugs, Spices, and simple Medicines*.

Gerard, (*John*) his History of Plants, in *English*; printed at *London* 1597, in *Folio*.

Gerard's History enlarged by *Johnson*; printed at *London* 1636.

Gesner, (*Conradus*) of the Gardens of *Germany*.

Gesner, of the Collection of Roots.

Gesner's Catalogue of Plants, in four Languages.

Gesner, on the Nature of Fossils, Stones, and Gems, with Figures, &c. printed at *Zurick* 1565, in *Octavo*.

Guilandinus, (*Melchior*) Fourth President or Governor of the Garden at *Padua*, his Apology against *Matthiolus*; printed at *Padua* 1558, in *Quarto*.

Gulielmus Piso, Physician at *Amsterdam*, his Natural and Medicinal Account of both the *Indies*; printed at *Amsterdam* 1658, in *Folio*.

H.

Hariot, (*Thomas*) his Description of *Virginia*; *Clusius* turned it into *Latin*, and this is the first Part of the *West-Indies*.

Hermannus. See H. L. B.

Hermander, (*Francis*) his History of Plants, Animals, &c. of *Mexico*; first compiled by this Author, and afterwards digested into a Volume by *Nardo Antonio Reccho*; printed at *Rome* 1651, in *Folio*.

Hermolaus Barbarus, his five Books of Commentaries on *Hippocrates*; printed at *Cölogne* 1530, in *Folio*; and the same Author's Corrections of *Pliny's* Natural History; printed at *Basil* 1534, in *Folio*.

Hieronymus, or *Jerome* of *Brunswick*, his plain German Proof: To which is added, *Brunfelsius's* Herbal; printed at *Strasburgh* 1531, in *Folio*.

Hippocrates's Works.

Honorius Bellus Vincentinus, a Physician of *Crete*, his Epistles of Plants, writ to *Clusius*; to which is added the History.

Hortus Medicus Edinburgenfis, the Physick Garden at *Edinburgh*, or a Catalogue of Plants there, by *Jacob Sutherland* of *Edinburgh* 1683, in *Octavo*.

Hermannus's Catalogue of Plants of the Garden at *Leyden*, by *Paul Hermannus*, Professor of Physick and Botany in that University; printed there 1687.

Hortus Malabaricus Indicus.

Hortus Regius Blesensis; printed at *Paris*, 1655.

Hortus Regius Parisiensis, The Royal Garden of *Paris*, 1655.

I.

Johannes Baubinus's History of Plants, carried on by *Henricus Charleus*, Doctor of *Basil*, and enlarged by *Chabræus* of *Geneva* 1650, in *Folio*.

Imperatus Fcrantes, a *Neapolitan* Apothecary, published a Natural History in twenty-eight Books, with Figures of Stones, Corals, Sponges, &c. and of Plants and Fruits, thirty-three; printed at *Naples* 1599, and *Venice* 1672, in *Folio*.

Ten Parts of the History of the *West-Indies*, with an Addition to the ninth Part, in *Folio*.

Ten Parts of the *East-Indies*, in *Folio*.

Johnston's Natural History of Animals, with Copper-cuts; printed at *Amsterdam* 1657, in *Folio*.

L.

Lacuna, (*Andrew*) his Commentaries on *Dioscorides*, with Figures; writ in *Spanish*, and printed at *Salamanca* 1552, in *Folio*.

Lcnnius, (*Levinus*) of sacred Plants; printed at *Lyons* 1595, in *Octavo*.

Lerius, (*Johannes*) writ the History of *Brasil*, first in *French*, then in *Latin*; printed at *Geneva* 1594.

Linscotus, (*John Hugh*) his Itinerary and Voyage into the *East-Indies*, belonging to the *Portuguese*; with the Annotations of *Bernardus Paludanus*; printed at the *Hague* 1599, in *Folio*.

Lobellius, (*Matthew*) his Figures of Plants and Roots; printed at *Antwerp* 1581, in a long Form in *Quarto*.

His Illustrations of Roots, together with the further Care and Diligence of *William How* an *Englishman*; printed at *London* 1655, in *Quarto*.

Lobellius's Observations and History of Plants and Roots; printed at *Antwerp* 1576, in *Folio*.

Lonicerus, (*Adam*) this was the Herbal of *Eucharius*, writ in *High-Dutch*, and afterwards published under the Name of *Adam Lonicerus*, with 833 Cuts, about the Year 1582, at *Frankfort*.

Ludovicus Romanus his Voyage into the *East*: Seven Books, with the Notes of *Archangelus Madriguanus* and others, who have described the New World.

A General History of Plants of *Lyons*, by *Gulielmus Rovillius* 1586; it is usually called *Dalechamp's* History, in *French*.

M.

Malpighius, (*Marcellus*) his Anatomy of Plants; printed at *London*; in *Folio*.

Marcgravius, (*George*) his eight Books of the Natural History of *Brazil*; this Work was printed in *Holland* with that of *Piso*, in the Year 1648, in *Folio*.

Matthiolum his Commentaries on six Books of *Dioscorides*, &c. printed at *Venice* 1565.

Matthiolum quoted by *Lobellius* in the Book intituled *Icones Lobellii*.

Matthiolum on the *Venice* Edition 1565.

Mentzelius, chief Physician to the Elector of *Brandenburgh*, his universal Index of Names of all the Plants, in several Languages; with a small one of the scarcest Plants, and some Figures cut in Copper; printed at *Berlin* 1682, in *Folio*.

Mesue's Works, of the Choice of cathartick or purging Medicines, with the Correction and Use of the two Books, whereof the first are the general Canons, and the second treats of Simples; printed at *Venice* 1623, in *Folio*.

Monard, (*Nicholas*) a Physician of *Seville*, his History of simple Medicines brought from *America*; writ first in *Spanish*, then done into *Latin* by *Clusius*, and afterwards translated into *French* by *Antony Colin*, Apothecary at *Lyons*: This Work was printed with that of *Garzias ab Horto* and *Acosta*, in the Year 1619, in *Octavo*.

Morison's Universal History of Plants; the second Part by *Robert Morison*, Botanick Professor at *Oxford*, printed there 1680, in *Folio*.

The *Hortus Regius Blesensis*, enlarged by *Robert Morison*; printed at *London* 1669, in *Octavo*.

Morison's Botanick Preludes.

N.

Norison's New Description, or ranging of umbelliferous Plants; printed at *Oxford* 1672, in *Folio*.

Nehemiah Grew's New Anatomy of Plants; printed at *London* in *Folio*.

Nicander's Treacle and Alexipharmacks, with the Greek Readings, or *Scholia* of an uncertain Author; printed at *Venice* 1523, in *Quarto*.

An Edition of the same Author, with the Greek and Latin Readings of *Gorræus*; printed at *Paris* 1557, in *Quarto*.

O.

Oviedus Gonzakvus Ferdinandus his general History of the *West-Indies*: This Work has been turned into *French* by Mr. *Duret*. In *Octavo*.

P.

Paludanus Bernardus's Notes on the *Indian* History of *Linscotius*, with the Addition of Indexes, &c.

Paul Herman's *Prodromus* of the *Batavian* Paradise; printed at *Amsterdam* in *Octavo*.

Parkinson's *Terrestrial Paradise*, in which is contained a History of all Flowers, Fruit-Trees, &c. that are cultivated in Gardens or Orchards; printed at *London* 1629, in *Folio*.

Parkinson's *Theatrum Botanicum*; printed at *London* 1640, in *Folio*.

Petrus Pena. See *Adversariorum Opus*.

Palus Renealmus Blesensis his Specimen of the History of Plants, with Copper-cuts; printed at *Paris* 1611, in *Quarto*.

Philip Pigafetta's History of the Kingdom of *Congo*, &c.

Pileterius, (Caspar) of the Plants growing in *Zeland*, in an Alphabetical Manner; printed at *Middleburgh* 1610, in *Octavo*.

Piso. See *Gulielmus Piso*.

Pliny's History, in which several Things are extant concerning the Culture and Virtue of Plants. This Work was translated into *French* by Mr. *Dupinet*, and printed at *Lyons* 1581, in *Folio*.

Pitton Tournefort's Elements of Botany, or the Method of knowing Plants; printed at *Paris* at the King's Charge 1694, in *Octavo*.

Leonard Plukenet's *Phytographia*; the first Part printed at *London* 1691, in *Folio*.

Father *Plumier's* Description of *American* Plants; printed at *Paris* 1693, in *Folio*.

Pona (John) Apothecary at *Verona*, his Catalogue of Simples growing in *Montebaldo*, with the Description of several others, and sixteen Figures, adding *Clusius's* History of rare Plants. This Work, after several Editions, was translated into *Italian* by *Francis Pona*, Doctor of Physick, and the Author's Son; printed at *Venice* 1617, in *Quarto*; at *Basil* 1608, and at *Antwerp*, in *Folio*.

Prosper Alpinus of *Egyptian* Plants; printed at *Venice* 1633, in *Quarto*.

Prosper Alpinus's two Books of Exotick Plants; printed at *Venice* 1656, in *Quarto*.

Johannes Baptista Porta, a *Neapolitan*, twelve Books; printed at *Frankfort* 1592, in *Quarto*: This Author writ several other Works, especially the *Physiognomy*, or History of several Plants, adorned with Figures, in *Octavo*.

Q.

Quadranius, a Divine, and Botanist to the Duke of *Ferrara*, writ a Treatise of Treacle and Mithridate; printed at *Ferrara* 1597, in *Quarto*.

R.

Ray's Catalogue of *English* Plants, and the Isles adjacent; printed at *London* 1677, in *Octavo*.

Ray's History of Plants; printed at *London* 1686, in *Folio*.

Ray's Methodical Synopsis of *British* Roots, by the same Author, *John Ray*, Fellow of the Royal Society; printed at *London* 1690, in *Octavo*.

Rauwolfius, (Leonard) his Description of several Plants in his Travels into the *East-Indies*, and their Cuts; printed 1583, in *Quarto*.

Renodæus, (John) his five Books of Pharmaceutical Institutions; to which are added three of the *Materia Medica*; printed at *Paris* 1608, in *Quarto*.

Robini Hortus, or the Garden of *John Robin*, Royal Botanist to *Henry IV.* of *France*, with 214 Figures; printed at *Paris* 1608, in *Folio*.

Rondeletius of Fish, printed at *Lyons* 1554.

Ruellius's Translation of three Books of *Dioscorides* into *Latin*, concerning the Nature of Roots; printed at *Bril* 1557, in *Folio*.

S.

Scaliger, (Julius Cæsar) his Animadversions upon six Books of *Theophrastus*, of the Causes of Plants; printed at *Geneva* 1566, in *Folio* and *Octavo*.

Schola Botanica, printed at *Amsterdam* 1689, in 12°.

Schroder's *Pharmacopœia Medico-Chymica*, whereof there are several Impressions.

Schwencfeldius's Catalogue of the Roots and Fossils of *Silesia*; printed at *Leipsick* 1601, in *Quarto*.

Suvertii Florilegium, in which, besides the many Figures, there are forty-seven Plants from both the *Indies* not described before; printed at *Frankfort* 1612, in *Folio*.

Sylvatici, (Matthæi) *Opus Pandectarum*; printed at *Venice* 1499, in *Folio*.

T.

Tabernæmontanus his *German* History, published in three Parts, with 2087 Figures; printed at *Frankfort* 1588, in *Folio*.

The same enlarged with the Description of Plants, Cuts, and several Medicines, by *Caspar Bauhinus*, in the Year 1613, in *Folio*.

The Figures or Prints of the same, with the bare Names in *Latin* and *High-Dutch*; printed at *Frankfort* 1590.

Thalius, *Sylva Hercynia*, or a Catalogue of Plants, growing naturally on the Mountains and Parts adjacent to *Hercynia*; printed at *Frankfort* 1588. This Catalogue is usually joined to and adorned with the Medicinal Garden of *Camerarius*.

Theophrastus's History of Plants, the *Greek* Edition, printed at *Venice* 1552, in *Octavo*; at *Eafil* 1541, in *Quarto*; and *Gaza*'s Version at *Lyons* 1552, in *Octavo*, with *Jordan*'s Correction.

Theophrastus Eresius's ten Books of the History of Plants, which *Bodæus* illustrated; printed at *Amsterdam* 1644, in *Folio*.

Thevet's Cosmography, in *French*, published with several Figures of Plants and Animals. The same Author has writ in *French*, a History of what is singularly remarkable in *New France* in *America*; whereunto are added twelve Figures of Plants; printed at *Paris* 1557, in *Quarto*.

Tragus his History, which was often published at *Straßburgh* in the *German* Language, in *Folio*, but now is translated into *Latin*, with 567 Cuts, though they are described to 800; printed at *Straßburgh* 1522, in *Quarto*.

Turner, (*William*) his History of Plants, in *English*, with some Figures; printed at *London* in *Folio*.

V.

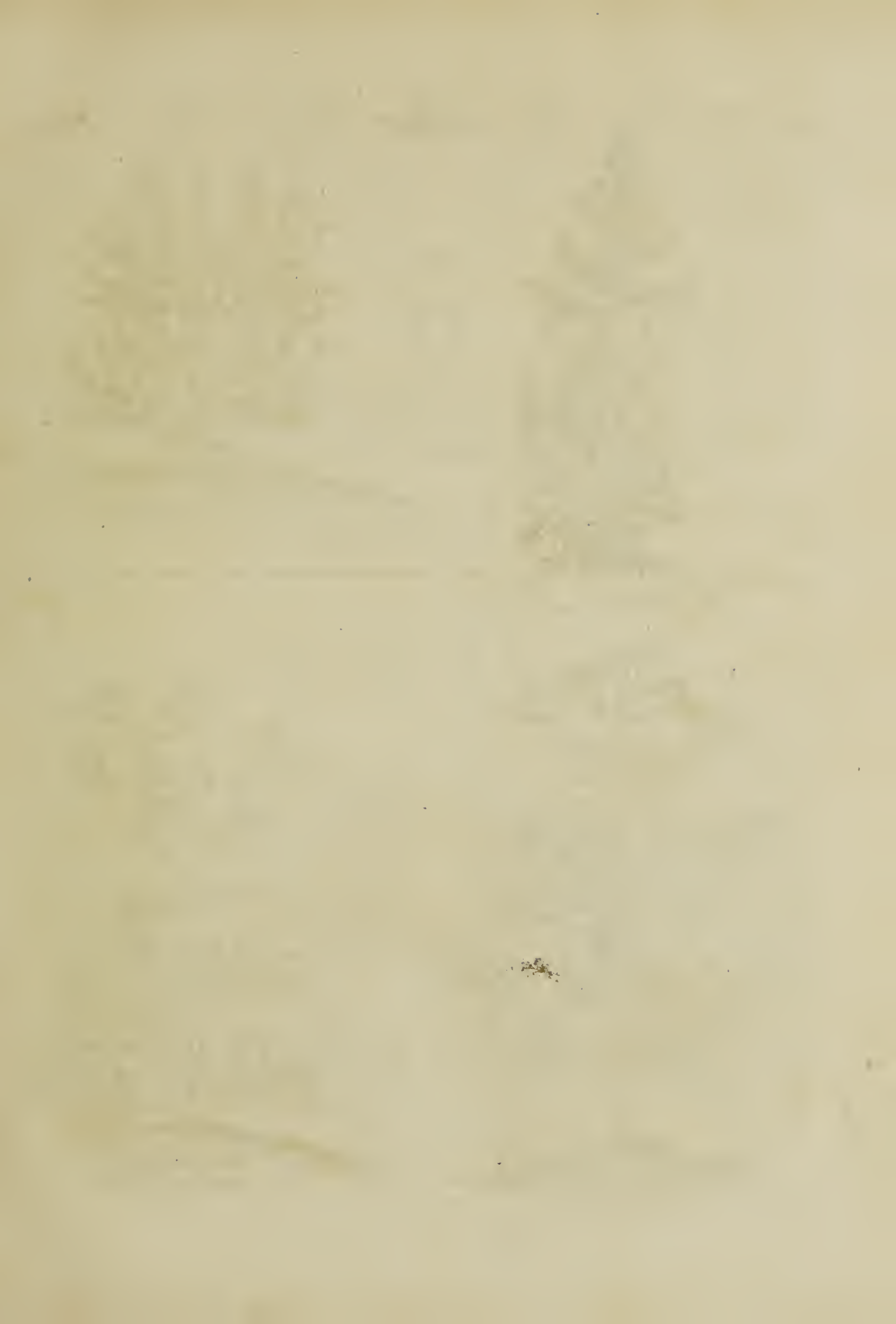
Veslingius's Observations upon *Prosper Alpinus*, concerning *Egyptian* Plants; printed at *Padua* 1638, in *Quarto*.

Virgilius Marcellus's Interpretation of *Dioscorides*, with Commentaries of the same; printed at *Cologn* 1529, in *Folio*.

Z.

Giacomo Zanoni's Herbal, taken from the publick Physick-Garden at *Bologna*; printed there 1675, in *Folio*.





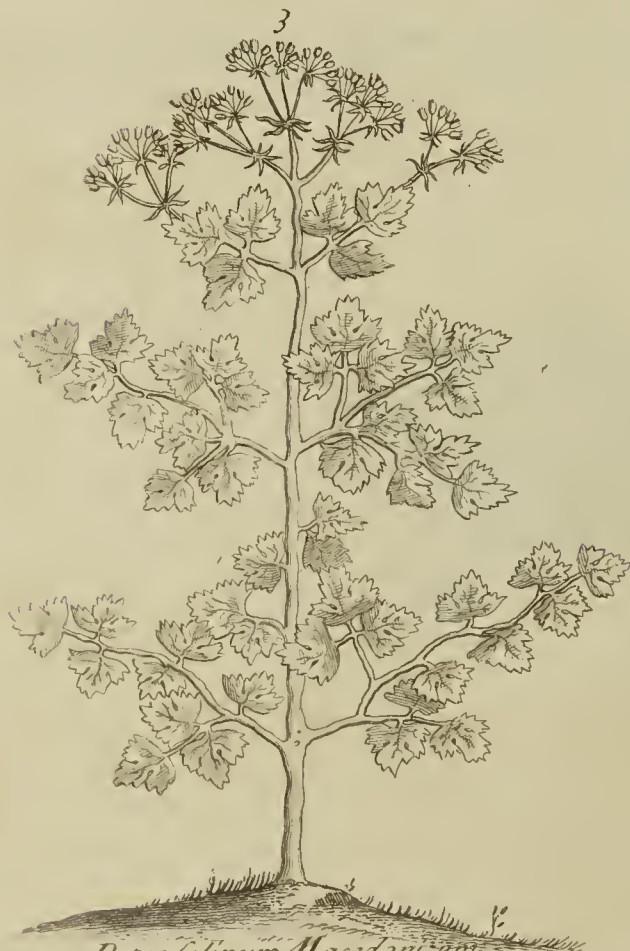
pag. 1.



The Wormseed Plant



The seed call'd Chouian



Petroselinum Macedonicum.
Macedonian Parsley



The Siftis, or
Hartwort of Marfeilles

P O M E T's GENERAL HISTORY O F D R U G S:

With what has been farther observ'd by *Lemery*,
Tournefort, &c. on the same Subjects.

B O O K I.

C H A P. I.

O f S E E D S.

1. O f Wormseed.

Pomet.

WORMSEED has its Name from its principal Virtue, which is to destroy all Kinds of Worms generated in human Bodies; particularly those in Infants or young Children. It is likewise call'd *Santoline*, or *Xantoline*, *Semen Sanctum*, the Holy Seed, *Semen Santonicum*, *Semencine* and *Barbotine*. It is a small Seed, which the *Persians* trade in by their *Caravans* from *Aleppo*, *Alexandria* and *Smyrna*, and which is afterwards transported to *England*, *Holland* and *France*.

The Plant which bears the *Wormseed*, has such small Leaves, that it is difficult to separate them from the Seed; for this Reason, those of the Kingdom of *Boutan* winnow it in proper Baskets, to separate the Leaves, which fly off in a Kind of Powder. Some Authors affirm this *Wormseed* to be the Seed of a Sort of Wormwood which is call'd *Santonique*, because it grows in *Xaintonge*. But this is not worth disputing about, since what is generally sold we know grows in *Persia*, and

on the Borders of *Muscovy*, as Letters which I have received upon several Occasions assure me, and as you may be satisfy'd from Mr. *Tavernier*, in the Second Volume of his Travels, Page 384, in these Words:

As to what regards the *Semæncine*, or *Wormseed*, it is not to be gather'd like other Seeds. The Herb which bears it is common enough, but must be suffer'd to stand 'till it is ripe; and the Misfortune is, that when it approaches to its Maturity the Wind shakes off a great Part of the Seed, which falls among the Weeds and is lost; and this it is which makes it dear. They never dare touch it with their Hands for fear of spoiling it, and when they are to shew it they take it in a Basen. When they gather what remains upon the Plant, this is the Management by which they do it; they take with them two Hand-Baskets, and walking into the Places where it grows, they move one of the Baskets from Right to Left, and the other from Left to Right, as if they were mowing the Herb, always laying hold of it by its Top, which is the Part where the Seed grows: The Seed thus falls into the Baskets.

B.

There

General History of DRUGS.

There is *Wormseed* also growing in the Province of *Kerman*; but it is not so good as that of *Boutan*, and scarce any more is gather'd there than what is used upon the Spot.

This Seed is not only good against Worms in Children, but the Northern Nations use it like *Aniseed* in *Comfits* and *Sugar-Plumbs*.

You ought to chuse that which is well-fed or plump, of a greenish Cast and well-tasted, and take care that it be very clean, and have nothing sticking and clinging to the Seed; for that will increase the Price considerably. You must take care it be not too green, and that *Southernwoodseed* be not imposed on you for this, tho' they are easily to be distinguish'd; for the *Wormseed* is moderately large, long and greenish, and the Seed of *Southernwood* is light and yellowish, more resembling a Chaff cut very small than a Seed; add to this, that the *Wormseed* is bitterer and more aromatick.

The *Wormseed* is so well known and commonly used, that we need not speak of its Virtues: Its Bitterness is the Reason that it is generally cover'd with Sugar; and this Way makes what we call *Wormseed Sugar-Plumbs*.

When it is taken otherwise it should be beat to Powder and taken in any convenient Liquor, or made into a Bolus from half a Scruple to a Dram, for a Dose.

Chuse your *Wormseed* always as new *Lemery.* and fresh as you can, clean and round, of the strongest Taste and most fragrant Smell: It contains a great deal of Oil, with volatile and essential Salt in it: It is very proper for the Destruction of Worms, excites the Courses of Women, suppresses Vapours, strengthens the Stomach, causes a good Digestion, and adds a lively Colour and Complexion to the Face. The Dose, from half a Scruple to a Dram, in Powder, to be taken in the Morning fasting, or in an Infusion in Wine, or made into Confects, to be eat with roasted Apples Evening and Morning. The chymical Oil is excellent to anoint the Stomach or Belly with for the same Purposes. A compound Powder may be made thus: Take *Wormseed* two Drams; Powder of *Coraline* one Ounce; *Ethiops Mineral* half an Ounce: Mix them: Dose, from half a Dram to a Dram, fasting.

[This is the Seed of a foreign Species of *Wormwood*, call'd *Alexandrian Wormwood*, or the *Wormseed Plant*. The *Abinthium Santonicum Alexandrinum* sive *Sementina* & *semen Sanctum*. Park. 102. *Abinthium Santonicum Judaicum*. R. Hist. 1. 368. Hist. Ox. 3. 8. It is a Plant of about two Feet high, the Stalk is hard and woody, the Leaves are large and finely divided, of a greyish

or ash Colour rather than green; the Stalk divides into many Branches towards the Top, which are thick set with small Leaves and numerous Clusters of Seeds; these upper Leaves are those small ones which, as *Pomet* observes, it is hard to separate from the Seeds.]

[The Seed is small, light and chaffy, composed of a Number of thin brittle Membranes, set on a short Pedicle, and easily falling into Powder, on being rubb'd between the Fingers.]

2. Of the Choïan in French, or Carmine-Seed.

THIS is a little light Seed, of a yellowish green Colour, the Taste *Pomet.* something biting; and much resembling the *Wormseed*, except that it is much larger and lighter.

This Plant grows low, and carries its Seed in little Bunches or Clusters on its Top, in a Manner little different from the *Wormseed*.

I have found it impossible to know positively the Place of Growth of the Plant which bears the *Chouan*; all that I have been able to learn of it has been from some Persons of the Retinue of *M. de Guillerague*, who went Embassador from the King of France into Turkey, who at their Return brought a considerable Quantity of it to Paris with them.

If you would know how to chuse the best Seed, you must take that which is greenish, the largest, and best clean'd or dress'd, and least fill'd with Specks, like Holes in rotten Wood.

It is of no other Use, that I know of, in France, but to make *Carmine*, and for the Feather-Men who dye with it, but at present mind it very little.

This Author agrees with the former in the Description and Use of this *Exo-tick*; which he says is like *Wormseed*, but in Taste a little pungent; it grows upon a Shrub-Plant, plumb'd on the Tops like a *Nosegay*; it is brought from the *Levant*, and used for *Carmine*.

[This is the *Santonicum viride*, Offic. Dale's Pharm. 100, the green *Wormseed* of the Shops; it is supposed to have the same Virtues with the former; but is so seldom imported that the Name of it is almost lost. It is probably the Seed of some foreign *Wormwood*; but no Author has yet ascertain'd the particular Species.]

3. Of Macedonian-Parsley.

Pomet. *Macedonian-Parsley* is a Plant which resembles, in some measure, our Garden Parsley; but the Seed is a great deal

deal less, much longer and sharper pointed; it grows in Clusters like *Fennel-Seed*. This Plant receives its Name from the Kingdom of *Macedon*, where it grows naturally, and from whence the Seed is transported, which is almost the only Part of it that is used in Physick.

Make choice of the newest Seed, and such as is clean, well fed, longish, and of a brownish green Colour; let it be well-tasted and aromatick, which are the chief Distinctions of the Goodness of *Macedonian-Parsley*: There are some who very improperly use our common Parsley-Seed, and others again a Sort of black Seed from the large *Smallage*, which the Gardeners falsely call *Macedonian-Parsley*. *Andromachus*, Physician to *Nero*, General of the *Roman* Legions, in the Time of the War betwixt the *Romans* and *Hannibal*, invented a Treacle, which we now call *Venice-Treacle*, in which he put this Seed, by the Name of *Macedonian-Parsley*, as it is a powerful *Alexipharmack*, or Resister of Poison or Pestilence.

It may be taken early in the Morning, half a Dram in a Glass of Wine, or other Liquor proper to the Disease.

Says it is the same Species of *Parsley* *Lemery*. with ours; but the Leaves are much larger, and a little more indented; the Seed abundantly smaller, longer, sharper pointed, and more aromatick. This Plant grows in *Macedon*, from whence the dried Seed is brought hither.

The Choice of it ought to be the same as before directed. It contains a great deal of exalted Oil and volatile Salt; it is aperitive, excites to Urine, provokes the Monthly Courses, resists Poison, and expels Wind; it is Lithonriptick, or a powerful Breaker of the Stone in the Kydnies; and apply'd in the Form of a Cataplasim, eases Pain, and abates the Raging of the Gout, especially from a cold Cause. This Seed may be used either in Powder, Decoction, Tincture, chymical or express'd Oil, and in the distill'd Water it is opening, cleansing, diuretick and sudorifick, and therefore is used in the Composition of the great Treacle of *Andromachus*.

[This is the Seed of a Species of Parsley call'd *Petroselinum Macedonicum verum*. Ger. 864. *Apium Macedonicum*. H. Ox. 3. 394. It is a Plant of about two Feet high, with Leaves like those of the common Parsley, only that they are a little hairy and more notch'd on the Edges. The Stalk is divided into many Branches at the Top and beset with Clusters of white Flowers, which are follow'd by the Seeds before describ'd. It is a common Plant in many warm Countries; but will not bear the Cold of our Climate.]

4. Of Sefeli of Marseilles.

THIS *Sefeli* takes its Denomination from *Marseilles*, which is its *Pomet*. native Climate, though it flourishes more in several other Parts of *Provence* and *Languedoc*. It is a Plant which passes for a Kind of *Fennel*, and is by many Authors call'd *Fœniculum tortuosum*, or *Crooked Fennel*; but it has fewer Leaves than the common Fennel, and those not so long, nor is the Stalk so strait or high, but more naked, and the Branches less regular, spreading themselves wider on the Sides near the Bottom. We use the Seed, which grows by Clusters on the Tops, after the same Manner as *Dill*. When it comes to Maturity it looks very much like the wild *Fennel*.

This Seed ought to be of a moderate Size, longish, heavy, well clean'd and of a greenish Colour.

There are several other Sorts of *Sefeli*; as that of *Candy*, *Peloponnesus*, or the *Morea*, *Ethiopia*, &c. but as it is only the Seed of the *Sefeli* of *Marseilles* that is in use, I shall not mention the others, but refer you to the Authors that treat of them. Some assign the same Virtues to this *Sefeli* of *Marseilles* as was given to the *Parsley* of *Macedon*; and some Botanists call it the *Siler Montanum*, or *Sefeli* of the Mountains.

The Carriers who bring from *French Comté* the *Berne* and *Valteline* Cheeses, and Sweetmeat Boxes, sometimes bring us also, in little Bales, a Seed which they call *Sefeli*, larger and of a stronger Smell than that of *Marseilles*, which they give their Cattle that bring their Goods to fatten them, that they may sell the better at *Paris*.

The *Latin* Authors call it by these Names, *Sefeli Massiliense*, or *Sefeli* of *Lemery*. *Massilia*; *Sefeli Massiliense Fœniculi folio Dioscoridis censetur*, *Fœniculum tortuosum*, according to *Baubin* and *Tburnesfort*; *Sefeli Massiliense folio Fœniculi crassiore*, *Ad Lobel*, or the *Massiliæ Sefeli* with the thicker Fennel Leaf; *Fœniculum Petræum*, or *Rock-Fennel*.

After he has given the same Description of it as *Pomet*, he says, it grows in sandy Places in the hot Countries, as in *Languedoc*, *Provence*, and about *Marseilles*: The Seed is used in Physick, and brought to us dry; it ought to be chose moderately large, fresh, and of a grateful Smell; then it affords a great deal of essential Oil and volatile Salt, is hot and dry, incides, opens, dissolves; it is cephalick, neurotick, pectoral and nephritick; good against Epilepsies, Apoplexies, Megrims, Vertigo's, Lethargies, Cramps, Palsies, Convulsions, Coughs, Colds, Catarrhs, Obstructions of the Lungs, Wheezings, Shortness

of Breath, Dropfies, Cholick, Crudities in the Stomach, Wind, Obftruftion of the Terms, Pain and Stoppages in the Reins and Bladder; and may be taken in Powder from a Dram or two, or infus'd in Wine, or boiled in Wine, Ale or Water; likewise a Tincture may be drawn from it in Spirit of Wine.

This is the Seed of the *Scfeli Maffiliense*. R. Hist. 1. 414. *Libanotis Maffiliensis Ferula folio*. Hist. Ox. 3. 310. It is a Plant of three or four Feet high, the Leaves are like *Fennel*, but shorter and of a paler Green; the Flowers grow in Clusters on the Tops of the Branches, and are white. The Seed is said to be a Specifick against the Poison of Hemlock.

5. Of Ameos, Bishop's-Weed, or the Ethiopian-Cummin.

THE French call this *L'Ammi*, and *Pomet*. *D'Ameos*. It is a Plant which has Leaves small and indented, and bears a Stem pretty high, with many Branches, which terminate in Tassels adorn'd with white Flowers, after which comes a little roundish Seed, small, and very much resembling Grains of Sand, from whence the Plant takes its Name.

The Seed is the only Part of the Plant that is in Use; it ought to be chose fresh or new, greenish, well-fed, of a little bitterish Taste and aromattick Smell: That which comes from *Alexandria* or *Crete* ought to be esteem'd before that which is cultivated in several Gardens in *France*, which has not that Taste between *Origanum* and *Thyme*, so easily observ'd in that of *Alexandria* and *Crete*, which is much the better for all Uses. It is incisive and aperitive. The Dose is from half a Dram to a Dram.

It is call'd *Semen Ammeos*, or *Ammi Lemery*. *ab Arena*; the Name being given to this Plant because the Seed is very like to Grains of Sand: It affords a great deal of essential Oil and volatile Salt, and is attenuating, cutting, aperitive, hysteric, carminative, cephalick, resists Poison, and is one of the four lesser hot Seeds; it expels Wind, is good against the Cholick and Pains of the Womb, and provokes the *Menses*; it is used in Powder from half a Dram to a Dram, in a Decoction with Wine or Water, or in a Tincture extracted with Spirit of Wine, from a Dram to two Drams.

[These are the Seeds of the *Ammi Odore Origani*. Hist. Ox. 3. 295. *Ammi creticum*. Ger. 881. They are brought from *Ægypt*, by the Way of *Alexandria*, to *Venice* and *Germany*, and thence into the other Parts of *Europe*. The Plant is

about two Feet high, the Stalks are slender, branched and striated, the lower Leaves broad and jagged, but the upper much more finely divided; the Flowers stand in Umbels, and are very small and white.]

6. Of Thlaspi, or Treacle Mustard.

THIS Plant is about a Foot high, and has Leaves something of a deep *Pomet*. green Colour; the Stem is charg'd with a great many Branches, bearing white Flowers, after which grow flat Pods, resembling *Lentils*. The Seeds are of a yellow Colour, tending to red, which in course of Time change to a dark red, and the older they are, the darker they grow. This Seed is oblong, and a little picked at the Ends.

You ought to chuse that Seed which is clean and fresh, of the reddish Cast, sharp and biting; and to know that it grows in the hot Countries, such as *Languedoe* and *Provence*. No Body should go to buy this at the Seed Shops, any more than any other foreign Seed, because they frequently sell the Seeds of the common Garden Crefs for those of the *Thlaspi*, at such Places, to those who do not understand the Difference. But there is another Sort of *Treacle-Mustard*, whose Stem, Leaves and Pods are much less, as well as the Seed: This is altogether yellow and smaller, comes up very near to it in Taste, but is abundantly short of it in Virtue, for which Reason it ought to be rejected. I shall pass by the other Sorts of the *Thlaspi* which are out of Use.

This is particularly recommended for the Cure of the *Sciatica*, Dissolving of the Stone, and Grumous Blood; given in Powder from half a Scruple to two Scruples, in the Morning fasting.

The Root is pretty large and fibrous, woody, white, and a little acrid, or *Lemery*. biting. This Plant grows in uncultivated, wild, stony or sandy Places, much expos'd to the Sun; likewise among Corn, on the Tops of Houses, and against the Walls; it affords a great deal of volatile Salt, and essential Oil. We bring the dried Seed from *Languedoe* and *Provence*, where it grows better than in the more temperate Climates.

We chuse the fairest Seed, which is most biting and piquant to the Taste, like Mustard. It is used in the Composition of several Medicines, and is incisive, attenuating, deterfive, aperitive, proper to provoke Urine, and the Terms, to hasten the Birth, and bring away the After-birth, and is very serviceable to break inward Apostems.

[These are the Seeds of the *Thlaspi Dioscoridis*, Ger. 204. *Thlaspi Arvensis siliquis latis*, Hist. Ox.

Fig. 4.



*The Amos, or
Ethiopian Cummin*



Thlaspi or Treadle Mustard



*The Daucus, or
wild Carrot of Candia*



*The Carum, or
Caraway*

Ox. 2. 293. It is a Plant of about eight Inches high, the Flowers are white and compos'd of four Leaves each; the Leaves are broad and oblong, the Seed Vessels are broad and flat, the Seeds small and dark-colour'd. It grows wild in *England*, but is not very common. The Seed is little us'd except as an Ingredient in the *Venice Treacle*.]

7. Of *Daucus*, or Wild-Carrot of Crete or Candia.

THIS *Daucus* is a Plant very like *Pomet*. a Carrot; it is a Foot and a half high, and bears on its Top several Bunches or Clusters of white Flowers; the Seeds are of a pale green, hairy and whitish, something like *Gummin-Seed*, tho' not altogether so long or big, nor of so strong a Smell; but on the contrary, their Smell and Taste are both agreeable and aromatick, especially when one has held them some Time in ones Mouth.

This Seed being downy, frequently has little Animalcules and a Dust hanging about it; this Fault encreases as the Seeds grow old, by the Particles of Matter that separate from those little Creatures; it ought to be chosen new, well fed, and the cleanest that can be found. Sometimes it is brought from *Germany* and the *Alps*; but this is not so good or useful as that which comes from *Crete*, which is only to be chose.

It is singular for the *Stone*, and those who are subject to *Wind-Cholicks*: It is ranged amongst those Medicines which are call'd Lithontripticks, and passes for a powerful *Carminative*, given in *Radish-Water*, to a Scruple, or in White-Wine, against the *Stone* or *Gravel*, early in the Morning; it may be likewise administer'd in *Wind-Cholicks* at Bed-time in *Aniseed*, *Fennel*, or *Rue-Water*, and some add to it a Scruple of Salt of *Worm-wood*.

The Leaves of this Plant are something like those of *Fennel*, the Root long, of the Thickness of a Finger, furnish'd with Fibres, and tasting like a *Parfnip*: It grows in stony and mountainous Places; the Seed is brought over dry from *Candia*, and other hot Countries; that which is new, clean, well-tasted, and odoriferous, is the best; it affords a great deal of Oil and volatile Salt.

Both the common *Wild-Carrot* and that of *Crete*, have one and the same Virtues; but that of *Crete* is much the strongest. They expel Wind, and are good against Pains of the Womb and Bowels, vehement Cholicks, Vapours and Hysterick Fits; as also against old Coughs, Cold,

Wheezings, Asthma's, Disury, and all Sorts of Obstructions of Urine, as Sand, Gravel, Stone, and tartarous Mucilage in the Reins, Ureters, and Bladder; they are us'd in Powder, from a Scruple to a Dram, or more, in Decoctions, in Tinctures with the Spirits. Dose from a Dram to three or four. An oily Tincture is made from them with Oil of *Turpentine*, against Cramps, Convulsions, Palsies, Pains and Aches from Cold.

[This is the Seed of a Myrrhis, call'd *Daucus Creticus* by the old Authors, and by the later, *Myrrhis Annua Semine striato villosa incano*. Tourn. 1 Inst. 315. *Myrrhis tenuifolia annua cretica Semine albo pubescente*. Hist. Ox. 3. 302. The Leaves of this Plant are finely divided, and hairy, the Stalks slender, a Foot high; the Flowers white, standing in Umbells. The Seed is accounted a good Alexipharmic, and is an Ingredient in the *Venice Treacle* and *Mithridate*.]

8. Of *Carui*, or Caraways.

CArui, which the *Latins* call *Carum*, and the *Greeks*, *Caron*, is a Plant *Pomet*. that approaches near to the *Wild-Parfnip*; the Leaves are large, indented and divided into many small Parts, among which are several Stalks about a Foot high, on the Tops of which grow Bunches, cover'd at first with white Flowers, which are afterwards turn'd into Seed, much like that of *Garden-Parfnip*, but that this is of a darker Colour, flatter, and of a more biting and piquant Taste.

This Plant grows in most Gardens, but as the hot Countries are most agreeable and productive of Aromatick Plants, the *Caraways* that the People of *Paris* buy out of the Shops, are those brought from *Provence* and *Languedoc*.

We ought to chuse this Seed well fed, fresh, greenish, of a warm acrid Taste, and aromatick Smell, and such as has an agreeable Flavour when held in the Mouth. It is esteem'd proper to make the Breath sweet, and very good to promote Digestion, to allay or expel Wind, to strengthen the Stomach, and provoke Urine. The *Germans* have such a Regard for it, that they put it whole into their Pye-Crust, mix it in their Bread, and in a great Measure in all their Sauces. Several Persons use the Leaves as a Pot Herb.

The Root is long, fleshy, pretty *Lemery*. thick, white, sometimes yellowish, but rarely, and of a *Parfnip* Taste. This Plant grows in the fattest Land in the Gardens, but prospers much the best in warm Soils; therefore contains in it a good deal of volatile Salt and Oil: It is incisive, aperitive, carminative, moderately binding,

binding, comforts the Stomach, helps Digestion, stops Vomiting, and operates much like *Anniseed*. *Caraways* are good against all cold Disaffections of Stomach, Bowels or Head, Falling-sickness, and the most inveterate Cholicks, strengthen the Womb, and quicken the Eye-sight. They are us'd in *Confects* to break Wind, &c. in Powder to provoke Urine, and in the Chymical Oil to all the Intentions aforesaid; besides which they are very serviceable to bring away both Birth and After-Birth. Dose from 12 to 16 Drops of the Chymical Oil.

[This is the Seed of the *Carum vulgare*. Park. 910. *Cuminum Pratenſe*, *Carui officinarum*. C. B. P. 158. a Plant of about two Feet high, the Root is large and white, the Stalks striated and jointed, the Flowers in Umbells white and five leav'd. It is common in *Germany*, and I have seen it in some Meadows in *England*. The Seed is an Ingredient in many of our Compositions. It may be taken in Substance from half a Dram to a Dram in any Liquor, or in the Distill'd Oil from three Drops to ten.]

9. Of Saxifrage.

Pomet. *Saxifrage* is a Plant so like *Thyme*, that it is difficult to distinguish them. This grows plentifully in *Dauphiné*, *Provence*, and *Languedoc*, among Stones and upon Rocks, which has occasion'd the Name of *Saxifrage* to be given to it, as also to many other Plants that grow in the like Places, as it signifies *Break-Stone*.

You must chuse the newest Seed you can get, which is of a warm piquant Taste and an agreeable Smell; the Virtue of breaking the Stone is attributed to it, given in Powder in a Morning early, in a Glass of the distill'd Water from the Plant, or any other *Diuretick* Water. Dose half a Dram.

There are a great many other Kinds of *Saxifrage*, which several Authors take Notice of; but as this Seed is that which is commonly in Use among us, and which is generally sold in the Shops, I shall speak no farther concerning the rest, which are treated of in many other Books, and particularly by *Dodonæus* and *Dalechamp*, who have written of them at large. Some will needs have it that all Plants which grow among Stones and Rocks are to be call'd *Saxifrages*.

Saxifrage, in *Latin*, *Saxifraga*, is *Lemery*. a Plant whose Leaves are almost round, indented on the Sides, being something like *Ground-Ivy*, but a little thicker and whiter, and on the hinder Part a little longer and smaller. The Stalks are about a Foot high, bearing on

their Tops little Flowers of five Leaves, dispos'd like a Rose, of a white Colour. When the Flower is off, it produces a Fruit almost round, which contains in two Partitions a very small Sort of Seed. The Root has abundance of Fibres, the Tops are surrounded with little Tubercles, about the Size of *Coriander-Seed*, or something bigger, of a Colour partly red and purple, and partly white, with a bitterish Taste; these Tubercles are commonly call'd *Saxifrage-Seed*. This Plant grows in Places where Herbs are not propagated, as upon the Mountains, and in the Valleys; it flourishes in the Month of *May*, and is a little viscous. The Leaves are larger, and the Stalks grow higher in some Places than others, but they are generally small, allowing a good deal of essential Oil and Salt.

It is very aperitive, proper in Stone and Gravel, and to open Obstructions, to provoke Urine and Women's Courses, cut the tartarous Mucilage, and expel it; and is chiefly us'd in Powder, from half a Dram to two Drams, or in an Infusion with White or Rhenish Wine.

[The Difference between the Descriptions given by these two Authors, might create Confusion; but it is to be observ'd, that they mean two separate Plants, both of which are call'd *Saxifraga*, and both have been us'd in Physick: The Plant describ'd by *Pomet* is the *Saxifraga Antiquorum*. Off. Dale. 231. *Saxifraga magna Mathioli*. Ger. Em. 605. That by *Lemery*, the *Saxifraga Alba vulgaris*. Park. 424. *Saxifraga Rotundifolia alba*. C. B. Pin. 309. and as this is order'd to be us'd in the College Catalogue, I have taken away the Figure before given by *Pomet*, and given one of this Plant.]

10. Of Cummin.

Cummin is the Seed of a Plant which is like *Fennel*, and grows plentifully *Pomet*. in the Isle of *Malta*, where they sow it as they do Corn here. In the Choice of it take that which is new, well fed, greenish, of a strong disagreeable Smell. Observe that it be not full of Holes or Worm-eaten, which it is very subject to be, which may be easily discover'd by the Eye, and by its being full of Dust; and more certainly by the taking up a handful of it from the rest; for the Seeds will be seen to be fasten'd together, and hang one from another by little Filaments, which are the Fibres of the Seed. Some use this Seed for Dropical Tympanies, because it is carminative: There is a great deal us'd to refresh and invigorate Horses, Oxen, and other domestick Cattle: They make an Oil of it by Expression, as of *Anniseed*, which is very good for the

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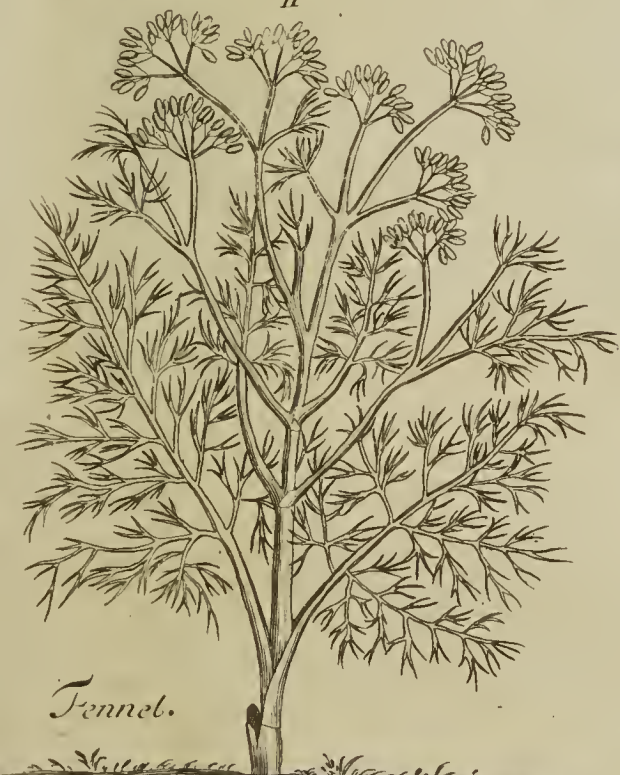
Saxifraga

10



Cummin.

11



Fennel.

11



Sea-

-Fennel.

the Rheumatism, tho' it yields but little in Quantity.

Many Persons make use of *Cummin-Seed* to replenish their Dove-Houses, because Pigeons are very dainty in their Feed, tho' it is not us'd just as we sell it in the Shops; but incorporated with a little Salt and Earth, such as the Pigeons are apt to pick up in the Fields, or else Loam, moisten'd with Urine, or the Brine of pickled Cod-Fish, or other like Matters, insomuch that in some Places People are forbid to sell it.

Cummin, *Cuminum*, or *Cyminum*, is a *Lemery*. Sort of *Caraway*, which bears a Stem about a Foot high, divided into several Branches; the Leaves are cut small, like those of *Fennel*, but a great deal less, rang'd by Pairs lengthways on the Sides. The Flowers grow in Umbrello's on the Tops of the thick Branches, of a white Colour; after them come the Seed, join'd by two and two, oblong and furrow'd as the *Fennel*, but less, and pointed or sharp at both Ends.

The Root is small and longish, and perishes when the Seed is gone: They call this Seed in *Malta*, where it is propagated, *Annis-Acre*, or *Cummin-Acre*, sharp *Anniseed*, or sharp *Cumminseed*; to distinguish it from the same *Anniseed* that is cultivated there, and call'd by the Name of *Sweet Annise*, or *Sweet Cummin* by the *Maltois*; which Circumstance makes several Botanists equivocate, who believe this to be the same Sort of *Cummin* with the sweet Seed. This contains a great deal of volatile Salt, and essential Oil: It is digestive, dissolving, attenuating, carminative, expels Wind, cures the Cholick, eases Pain, is profitable against Diseases of the Nerves: The Chymical Oil is good against all Obstructions of Urine, Stone, Gravel, &c.

[This is the Seed of the *Cuminum semine longiore*. C. B. P. 146. *Cuminum sativum* Dioscoridis. Ger. 907. It is one of the four greater hot Seeds: It gives Name to the *Emplastrum de Cymino*, and is a good Ingredient in many other Compositions.]

11. Of Fennel.

THIS is the Seed of a Plant which is known throughout the whole *Pomet.* World, and therefore needs no Description: I shall content myself to say, that the *Fennel* which we now sell, is brought from *Languedoc* about *Nismes*, where that Plant is cultivated with great Care, by reason of the great Quantity of the Seed which is carried into *France*, and chiefly to *Paris*.

Make Choice of the newest Seed, longish, of

a green Cast, sweet Taste, luscious and agreeable, and which is free from Mixture.

This is of Use in Physick, to expel Wind, for which it may be us'd instead of *Anniseed*; but it is much more us'd by the Confectioners, who cover the Seeds with Sugar, and distinguish them afterwards by Numbers according to the Quantity of Sugar they have on them. They take the Clusters of the green *Fennel*, which when cover'd with Sugar, they sell to make the Breath sweet, for the Green is reckon'd to be of the greatest Virtue. The Apothecaries make a distill'd Water from the green *Fennel* fresh gather'd, which is esteem'd excellent for taking away Inflammations of the Eyes; and they make after the same Manner a white Oil of a strong aromack Smell; but it yields so small a Quantity, that it is not worth the Trouble to make it. The Dryness of *Fennel* Seed makes it so, that it is very troublesome to make a green Oil by Expression, as is done of *Anniseed*. There are some who lay this Seed among their Olives, to give the Oil that comes from thence a fine Taste.

There is yet another Sort of *Fennel* which is wild, and which grows every where in the Fields, and upon Walls, without any Sowing; but the Seed of this is almost round, less, flatter, more acrid in Taste, and not so green as that we have been speaking of; it is scarce of any Use by reason of its sharp pungent Taste, and because the other *Fennel* is very common, especially since it has been cultivated in *Languedoc*; but at such Times as we had no other *Fennel* but that of *Italy*, which is call'd the *Florence Fennel*, the *Wild Fennel* was a little in Use.

There is another Kind of *Fennel*, which bears the Name of *Sea-Fennel*, which the *Latins* call *Crithmum*, or *Creta Marina*, which we pickle in Vinegar to sell in Winter with *Girkins* or little *Cucumbers*, which are preserv'd after the same Way.

Foeniculum or *Fennel*, is a Plant of *Lemery*. which there are various Sorts; I shall only mention two which are used in Physick. The first is call'd *Foeniculum vulgare minus acriore & nigriore semine*; or common lesser *Fennel*, with the sharp black Seed. It shoots forth a Stalk of five or six Feet high, hollow, of a brownish green Colour, fill'd with a spongy Pith. The Leaves are cut as it were into long Threads of a dark green, and agreeable Smell, a sweet and aromack Taste. On the Tops are large Clusters or Bunches, yellow and fragrant. The Flower is compos'd of five Leaves, in the Extremity terminating like the Cup of the Rose. After the Flower is gone, the Cup bears in it two oblong Seeds, swallow-tail'd, hollow on the Back, flat

on the other Side, blackish, and of a sharp Taste. The Root is as thick as a Finger or Thumb, long, strait, white, odoriferous, and of a sweet aromatick Relish.

The second Kind is call'd *Fœniculum dulce, majore & albo semine*; sweet *Fennel*, with the larger white Seed. It differs from the former, in that the Stalk is usually much less, the Leaves not so big, and the Seed thicker, white, sweet, and less acrid. They cultivate both Sorts in dry sandy Places. This of the latter kind, which is call'd *Sweet Fennel*, is more us'd in Physick, and is brought dry from *Languedoc*, where it is husbanded with great Care: It is the same Sort as that which is sometimes brought from *Italy*, which is call'd *Florence Fennel*. Your Choice of it ought to be the same as before directed. It yields largely essential Oil and volatile Salt; the Leaves, Branches and Root afford much Flegm, Oil, and fix'd Salt. The Leaves are good for Diseases of the Eyes, which they cleanse and strengthen; they clear the Sight, increase Milk in Nurseries, sweeten the Acrimony in the Guts, and fortify the Stomach. The Root is aperitive, and used to purify the Blood, as one of the five opening Roots. The Seed is carminative, proper to expel Wind, to assist Digestion, ease old Coughs, open Obstructions of the Lungs, and cause free-breathing.

[It is to be observ'd that *Pomet* here speaks of the *Sweet Fennel*, not the common Kind, as might be thought from the Beginning of the Chapter; but his Description of the Seed, as well as its Place of Growth and Uses, make it plain afterwards, that it is the *Sweet Fennel-Seed* he is speaking of. The common *Fennel-Seed* is the Seed of that so frequent in our Gardens; the *Sweet* is that of the *Fœniculum Dulce* of *Gerard*, &c. And the wild Kind, mention'd by *Pomet*, is the *Fœniculum sylvestre perenne Fœculæ Folio breviori*. Tour. I Inst. 311. The Root of the common *Fennel* is one of the five opening Roots, and its Seed one of the greater Carminative Seeds.]

12. Of Anniseed.

Anniseed comes from a Plant that we know as well as *Fennel*, as *Pomet*. there is hardly a Garden without it; but that which is sold in the Shops, comes from several different Places, as *Malta*, *Alicant*, &c. because it is abundantly sweeter, larger, and of a more fragrant and aromatick Taste and Smell, and less green than that which is produced in *France*.

Make choice of *Anniseed* that is of the same Year's Growth, large, clean, of a good Smell, and piquant Taste, and beware of that which

is any thing bitterish, which you can't distinguish but by your Taste.

The Use of the *Green Anniseed* is too common to admit of a long Discourse; and the more, because there are few Persons who do not understand that it is proper to expel and allay Wind, and that it is a Corrector of *Sena*. The Confectioners make use of great Quantities of the dried Seed, which they cover with Sugar for Confects.

They draw from this Seed by Distillation, a Water, and a white Oil, which upon the least Cold congeals, and liquifies or flows again upon the smallest Heat; this has a strong penetrating Scent, and abounds with a great many Virtues; but its strong Smell makes it but seldom used; the Apothecaries and Perfumers use it frequently in their *Pomatus*, instead of the Seed, as well to maintain the Colour, as to save Charges; for half an Ounce of the Oil will do more Service every Way than two Pounds of the Seed.

The Perfumers keep it by them to scent their Paste, and to mix among a Variety of other Aromaticks, which is what we properly call a *Medley*. Some People use this Oil, but very improperly, to make their *Anniseed-Water*, and the like. This Oil has a great many Virtues, and is an excellent Remedy to ease or allay the Gripes, especially in Infants, by rubbing the Navel therewith, or putting a small Drop or two among their Food. In a Word, it has all the same Virtues, and may be used to the same Intention with the Seed. There is likewise a green Oil drawn by Expression, of a strong Smell, and which has the same Virtues with the white, with this Difference, that it is not so powerful, because a great deal more in Quantity is drawn this Way; but it is not so pure, as Mr. *Charas* observes in his *Royal Dispensatory*, to whom we are indebted for this Invention.

In regard to the white Oil, we have it from *Holland*, partly because it costs less, and partly because it is whiter, clearer, and more fragrant than what is made here; whether this be purely from the Seed, or that they add something unknown to us by way of Menstruum, I do not pretend to say, but there may be People found here who can make it as good as in *Holland*; but I am satisfied it could not be made for the Price it is bought for. In regard to the Choice of it, it ought to be, as has already been observ'd, white, clear, and transparent, of a strong Smell, easily congealing by a little Cold, and melting by a little Heat; and such as when dropp'd on Water, swims like *Olive Oil*, and this Oil is call'd Essence, or Quintessence of *Anniseed*. The Water that is drawn off in making the Oil, is useful on the same

Book 1.
178.

12



Aniseed.

of Seeds.

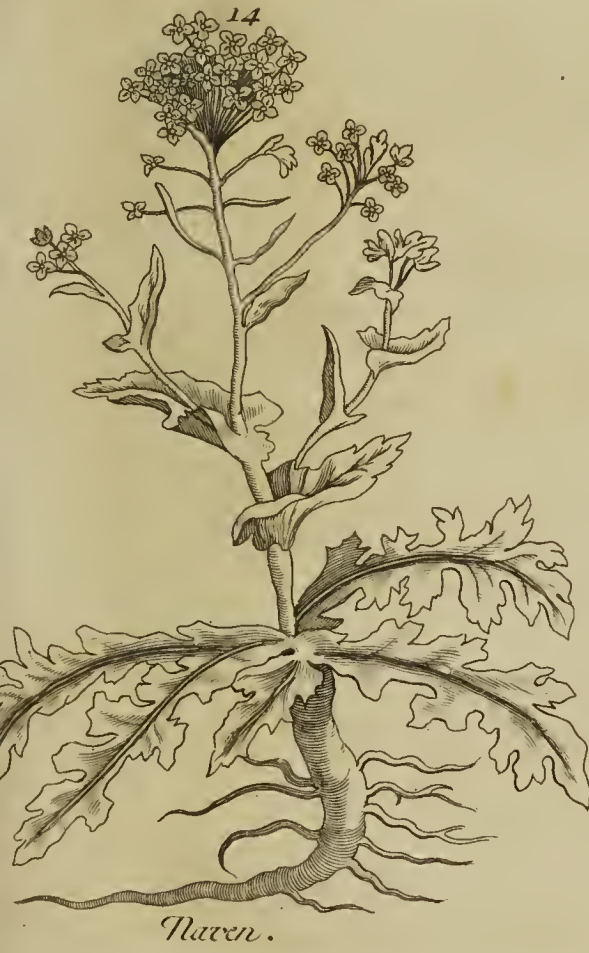
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Plate 4.



Coriander.

14



Navel.

15



Colliflower.

same Occasions as the Oil itself, but requires to be given in a much larger Dose.

Anisum, in *English Anniseed*, is a very *Lemery*. common Plant in our Gardens; the

Stem or Stalk is about three Feet high, round, hairy, hollow, and full of Branches; the Leaves are long, cut deep, whitish, odoriferous, and something like those of *Parsley*; the Tops bear large Bunches, supplied with little white Flowers, much resembling those of *Burnet Saxifrage*: It has a little Seed, of a greenish grey Colour, scented, and sweet in Taste, with a pretty agreeable Acrimony. The Root is small, and this Plant is cultivated in fat Land: The Seed is only used in Physick: The largest and best is brought from *Malta* and *Alicant*; it is much browner than that of *France*, because it is a great deal drier.

This Seed yields a great deal of essential Oil and volatile Salt: It is cordial, stomachick, pectoral, carminative, digestive, produces Milk in Nurses, and gives Ease in the Cholick; it provokes Urine, warms the Breast, opens Obstructions of the Lungs, is prevalent against Coughs, Hoarseness, and Shortness of Breath. This Seed is used to make common *Aqua Vitæ*, with *Irish Usquebaugh*, *Daffy's Elixir Salutis*, and in the *Laxative Electuary*, or Confection with Sugar and *Amonum*, wherein the Seeds are steep'd in Liquors, in which *Scammony* is dissolv'd, and sometimes in an Infusion of *Crocus Metallorum*. One Pound of *Anniseed* will yield about an Ounce of chymical Oil by Distillation, two or three Drops of which are specific in windy Cases, Gripes in Infants, to take away Pains and Noise in the Ears; outwardly the Stomach or Naval may be anointed therewith, and it may be dropp'd into the Ears, mix'd with a little Oil of bitter Almonds.

Le Febvre is of Opinion, these Seeds ought to be distill'd, being green, without any previous Digestion or Putrefaction, because this kind of Seed (saith he) abounds much with volatile Salt, of a middle Nature, so that the Water will not attract it to itself by length of Digestion; which will happen otherwise, if the Distillation be begun immediately after the Seed and Water are mix'd together. 'Tis true, saith he, that if Digestion precedes, the Water will be all spirituous, and of much more Efficacy than without, but without Digestion the Seed will yield much more essential Oil.

[This is the Seed of the *Anisum vulgatius minus annum*. Hist. Ox. 3. 297. *Apium Anisum Dictum semine suave olente*. Tourn. Inst. 305. The Plant flowers in July, and the Seed is ripe in August, the Root dying every Year, after it has

perfected the Seed. The Seed is one of the four greater hot Seeds, and is an Ingredient in many of our Compositions.]

13. Of Coriander.

Coriander is the Seed of a Plant which is very common amongst us, *Pomet.* and which grows plentifully about *Paris*, especially at *Auberville*, from whence all that we sell in the Shops is brought to us.

We ought to chuse such Seed as is new or fresh, fair, dry, well fed, the largest and cleanest we can get: Care must be taken that it be kept in a Place well secured against Rats and Mice, both those Creatures being very fond of it. It is but little used in Physick, but the Brewers employ it considerably, especially in *Holland*, and in some Parts of *England*, to give their strong Beer a good Relish. The Confectioners, after they have prepar'd the Seeds with Vinegar, cover them over with Sugar, which they call *Coriander-Confects*.

There are three Kinds of *Coriander*, the Greater, the Less, and the Wild; *Lemery*. but the Seed of the first is only used, being brought to us out of the *Streights*; the first, which is call'd *Coriandrum majus*, or *Coriandrum vulgare*, bears a Stalk about a Foot and a half, or two Feet high, round, slender, and full of Pith: The lower Leaves are like those of *Parsley*, but those which put forth towards the Top of the Stalk, are much less, and abundantly more cut in; the Flowers are small, dispos'd in Bunches or Clusters on the Tops of the Branches, of a whitish Flesh-colour; each Flower is compos'd of five Leaves; when the Flower drops off, the Cup bears a Fruit made up of two round hollow Seeds: The Root is small, strait, single, furnish'd with Fibres, and the whole Plant (except the Seed) has a very disagreeable Smell like that of a Bug.

The second Kind of *Coriander*, is call'd the *Coriandrum Inodorum*, or *Coriandrum minus odorum*, the less-smelling *Coriander*. This differs from the other Sort mention'd before, by reason it is much less, and its Branches more crooked. The Smell is nothing near so great, and the Fruit is compos'd each of two Balls, which in some Measure look like small Testicles.

Both this and the former Kind are propagated in our Gardens, but we only preserve the Seed for Physical Uses, which has the Virtue of the Plant, and is used in Confects, pleasant Liquors, and stout Beer. The greatest Part of the *Coriander-Seed* now in Use comes from *Auberville* and other Places about *Paris*: It produces a good deal

of essential Oil and Salt, corroborates the Stomach, helps Digestion, makes the Breath sweet, corrects Wind and flatulent Vapours, closes the Mouth of the Stomach, and resists Infection.

[The three Kinds of *Coriander* mention'd by Botanical Authors are the *Coriandrum majus*. C. B. P. 158. The *Coriandrum minus odorum*. L. B. And the *Coriandrum Sylvestre*, of the same Author; but the last is now found to be only a Variety of the former Plant; the first Species produces the Seeds we use, and they are ripe in *July* and *August*. They are an Ingredient in the *Lenitive Electuary*, and some other Compositions.]

14. Of Navew, Bunias, or Napus.

THIS *Bunias* or *Navewseed* is the Seed of a Kind of *Wild-Turnep*, which grows frequently amongst Corn. The *Wild Navew* has generally a Number of Branches; the Flowers are yellow, except in here and there a Plant, which has them mix'd with white: The Leaves of all the Species are very near alike, only larger or smaller, according to the Fertility or Barrenness of the Soil that produces them. They likewise produce their Seed alike, in Husks of an Inch or an Inch and an half long, more or less so, according to the Size of the Seed which they bear. As for the *Bunias*, or *Sweet Navew*, the Seeds of which we sell, they are twice as large as those of the other Sort, because the Seed is bigger. This Seed is round, of a purplish Colour, acrid and biting to the Taste, and in all other Things comes near to the common Turnep, excepting only its Alexipharmack Virtue, which is peculiar to it. The Species of this Plant, which grows plentifully almost every where, has a yellow Seed, which is less by half than the *Bunias* or *Sweet-Navew*, yet they are taken for one another. The chief Use of this Seed is for the Venice Treacle, which hardly makes it worth a Druggist's while to keep any Quantity of it. You ought to buy it of People you can depend upon, and always be carefull that you have not the common *Turnep-Seed* impos'd on you for it. Some Persons assure me, that the true *Wild-Navew* is the *Briony*.

But M. *Tournefort* condemns those who call *Briony-Seed* by that Name, and use it as such.

The *Napus*, *Bunias*, or in *French*, *Lemery*. *Navet*, scarcely differs any Thing from the Turnep, but by a certain Bearing which the Gardeners and Labourers distinguish it by, and by the Figure of the Root, which all the World knows. There are two Kinds of it, the one cultivated and the other wild; the first is call'd *Napus* by *J. B.* and *Ray*; *Napus sativa*

by *Tournefort*; and *Bunias* or *Napus* by *Ad. Lob. Ger.* The Stalk rises about a Foot and a half, or two Feet high, and spreads itself into Branches: The Leaves are oblong, deeply cut, rough and green: The Flowers are compos'd of four yellow Leaves, form'd like a Cross, which are succeeded by a long Pod of about an Inch, divided into two Apartments fill'd with Seed, thick and round, of a reddish, or something purplish Colour, sharp and biting in Taste: The Root is oblong, round, thicker at the Top, fleshy, and much less towards the Bottom, of a white or yellowish Colour, sometimes blackish on the outside, and white within, of a sweetish Taste, and agreeably piquant: It is cultivated in moist Grounds for the Kitchen.

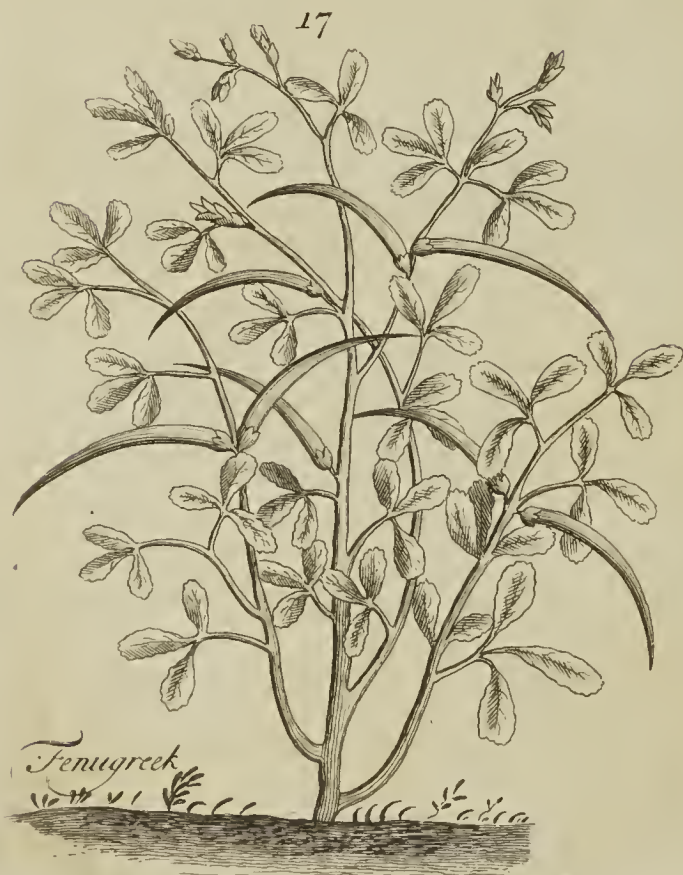
The second Kind is call'd *Napus Sylvestris* by *Tournefort*, and the *Baubins*, *Bunias sive Napus Sylvestris nostras*, *Park.* *Bunium* and *Napus Sylvestris* *Ad. Bunias Sylvestris Lobelii, Ger.* in *French*, *Wild-Navew*. It resembles the cultivated *Navew*, except the Root, that is much less: The Flower is yellow, and sometimes white: It grows among the Corn: The Seed is prefer'd in Physick to that of the domestick *Navew*: Both one and the other Sort yields a great deal of Flegm, Salt, and essential Oil.

The *Navew-Seed* is deterfive, aperitive, digestive, incisive; It resists Poyson, and carries off the peccant Humours by Perspiration; it provokes Urine, is proper in the Jaundice, in malignant Fevers, Small Hox, and is employed in making of Treacle. The Root is excellent for inveterate Coughs, Asthma's, and Phthisick, taken hot by Way of Decoction, and is externally applied to digest, resolve, or allay Pains, apply'd in Form of a Poultis. The Seed, which is call'd *Navette*, is none of the *Navew-Seed*, as a great many believe, but is the Seed of a Kind of wild *Colly-Flower*, which they call in *Flanders* *Colsa*, or *Rape-Seed*, cultivated in *Normandy*, *Britanny*, *Holland* and *Flanders*. They make of this Seed, by Expressing, an Oil, which they call *Oil of Navette*: The Colour is yellow, the Smell not offensive, and the Taste is sweet. It is commonly used for Burns, and serves the *Cap-makers*.

[The *Bunias* order'd to be used in the Shops is the *Napus Dulcis*. *Napus Sativa*. C. B. Pin. 95. *Bunias*. Ger. 185. The Seeds are blackish, and of a biting Taste. And the Seeds of the *Napus Sylvestris*. C. B. Pin. 85. *Bunias Sylvestris Lobelii*. Ger. 181. are what we have the Oil from, which we call *Rape-Oil*, and the *French Navette-Oil*.]

[It has been a great Controversy among the Learned, whether the Seeds of the *Napus dulcis*, or *Sylvestris*, should be used in the Venice-Treacle.

Galen



Galen differs from both Sects, and orders the Seeds of the *Pseudo Bunias* to be used in that Medicine.]

15. Of Colliflower and Rape-Seed.

Pomet. **C**ollyflower-Seed is a little round Seed, something like *Turnep-Seed*, but that it is a little larger. It is brought to us by Way of *Marseilles* from *Cyprus*, which is almost the only Place we know of where it produced in any Quantity. There is also some brought from *Genoa*, but it is not near so good as that from *Cyprus*, and it is with much more difficulty that it is rais'd.

The newest Seed ought to be chose, and that which is true *Cyprus*, without any Mixture, of which the Importer should shew Certificates and that it is true Seed, and of that Year's Growth, by reason it is of no little Consequence to the Gardener and others that sow it, to be disappointed of a whole Year's Production by the Badness of the Seed.

The *Colliflower* gives me an Opportunity of speaking of another Species, which some Authors call *Wild-Collyflower*, and which is propagated with great Industry in *Holland*, *Flanders*, *Normandy*, &c. for the sake of the Seed, which they make Oil of by Expression; and this is what is call'd *Navette-Oil*, and by the *Flemings* *Colsa*, or *Rape-Oil*: This Oil is of great Use to the Woollen Manufacture in *France*, especially in the Time of War, when Whale or Train Oil is scarce and dear. The Goodness of this Oil is known to a great many Persons, whose Occasions oblige them to understand it; nevertheless I advise them to chuse such as is pure and unmix'd with other Oils; which may be easily known by the Gold-Colour and Goodness of the Scent; for the true *Rape-Oil* is sweet, and on the contrary the *Linseed* bitter.

[I have before observ'd, that it is from the Seeds of the *Napus Sylvestris* that we have this Oil, which the People of *Lincolnshire* call *Rape-Oil*, and the Seed *Cole-Seed*: I am perfectly certain of this, as I have myself seen the Oil made there.]

16. Of Rice.

Pomet. **R**ICE is the Product of a Plant which grows very common in many Places of *Europe*: It commonly grows in the Water, and, as some observe, though the Water encreases during the Time of its Growth, it still keeps its Ear above the Surface of it. That which is now sold in *Paris* is brought from *Spain*

and *Piedmont*. This a Seed of so great Use and Profit, that it may be call'd the *Manna of the Poor*, and throughout several entire Counties, they have scarce any thing else to subsist on.

Chuse the newest Rice, well cleans'd, large, that is to say, plump or well fed, white, non-dusty, nor smelling rancid: Those who take notice of the Rice of *Piedmont*, esteem it much more than that of *Spain*, which is commonly reddish and of a saltish Taste. The Use of *Rice*, chiefly at *Paris*, is for the Lent Season, when they boil it in Water, then in Milk, and sometimes reduce it to Powder, that is to say Flour, which they use instead of Wheat Flour to thicken their Milk with.

To reduce *Rice* into Powder, pour boiling Water upon it, and then wash it with cold Water, so often 'till the Water remains clear; after this put it in a Mortar to pound, and when it is powder'd set it to dry, and then searce it fine; for it will often appear very fine when it is wet, and yet as it dries shew that it is coarse and requires sifting.

It is restorative, nourishing and sweetning; it conglutinates the Humours, and is useful in Fluxes of the Belly; it purifies the Mass of Blood, and stops Hemorrhages. It is used either in *Ptyfans* or Food.

Besides this, we sell *Pearl* or *French Barley*, which ought to be chosen new, dry, plump and well fed, white, but not blanch'd: It is prepar'd at *Charenton*, near *Paris*; but the best is that of *Vitry*. We likewise sell *Rice* that is brought from several Parts of the Country, but chiefly to make a Sort of Coffee of, which it tastes very like when burnt. The Poor buy what we call in *England* *Groats*, which is made from Oats, and when ground at the Mill is call'd *Oatmeal*. There is *Millet* also shell'd and pick'd, which they prepare in the Forest of *Orleans*: Besides other Pulse, as the green and yellow *Pease*, which come from *Normandy*; and the *Beans* of *Picardy* and other Places. There are other Things also sold in the Shops, which are made of Wheat Flour, as *Vermicelli*, both the white and yellow Sort, and *Starch*.

The *Vermicelli*, which the *Italians* invented, and call *Vermicelli*, is a Paste made out of the finest Part of the Wheat Flour and Water, which is afterwards drove through small Pipes like Syringes, to what Length or Thickness they please; so that from the Resemblance of its Figure to small Worms it is call'd *Vermicelli*. Some of this Kind of Paste they make in the Shape of Ribands, of two Fingers Breadth, and this they call *Kagne*; other Parcels of it are form'd like a Quill, and those they call *Macaron*; and some in small Grains

like Mustard-Seed, which they call *Semoule*, the Name by which they call the fine Flour they compose it of: And finally, some in the Shape of Beads, which they call *Patez*. They colour this Paste as they fancy, with Saffron or other Things, and sometimes make it up with the Yolk of an Egg, Sugar and Cheese. Of late Years this is made at *Paris*, and used in Soups and Broth, as in *Italy*, *Provence* and *Languedoc*.

The white *Vermicelli* ought to be new-made and as white as possible, and the Yellow of a fine golden Colour, the driest and the newest made which can be got.

Starch, which the *Latins* call *Amylum*, is made of the *Fæculæ* of Wheat Flour, which the Starch-makers form into Cakes and dry in an Oven, or by the Heat of the Sun. This used to be brought into *France* from *Flanders* and other Countries, but at present that which is made at *Paris* surpasses that of all other Places; and they transport from thence great Quantities into other Parts of *France*, and several neighbouring Countries.

We ought to chuse *Starch* for being white, soft and most subject to crumble, likewise such as has been dry'd in the Sun, and not in an Oven, which makes it of a greyish White: Its Use is so generally known that it needs no Description.

Rice in *English*, is call'd *Ris* in *Lemery*. *French*, and *Oryza* in *Latin*: This

Plant bears its Stalk about three or four Feet high, much thicker and stronger than that of Wheat or other Corn: The Leaves are long, like the Reed, and fleshy; the Flowers blow on the Top like Barley, but the Seed which follows is disposed in Clusters, each of which is enclos'd in a yellow Husk, ending in a spiral Thread. This Seed is oblong, or rather oval, and white: The Plant is cultivated in moist or low Grounds in *Italy*, and the Seed brought dry from *Piedmont*, *Spain*, and several other Places: Its chief Use is for Food, but is sometimes made use of in Physick: It nourishes well and stops Fluxes, therefore is good in Armies, Camps and Sieges, because it is of light Carriage and excellent Sustainance, and easily prepar'd: It encreases Blood and restores in Consumptions: It is made into *Fruментy* by boiling in Milk, or, for want thereof, in Water; or into Cakes with Water or Milk, and so baked dry; and is excellent good in Broth, with any Kind of Flesh.

[Beside the other Uses of *Rice* there is an excellent spirituous Liquor made from it, which the People of *Peru* call *Acua*, and we, from a wrong Pronunciation of the Word, *Arrack*.]

[*Rice* is the decorticated Seed of the *Oryza*. Ger. Park. &c. It is cultivated in many Coun-

tries, and is excellent both in Food and in Medicine, in Fluxes of all Kinds.]

17. Of Fenugreek.

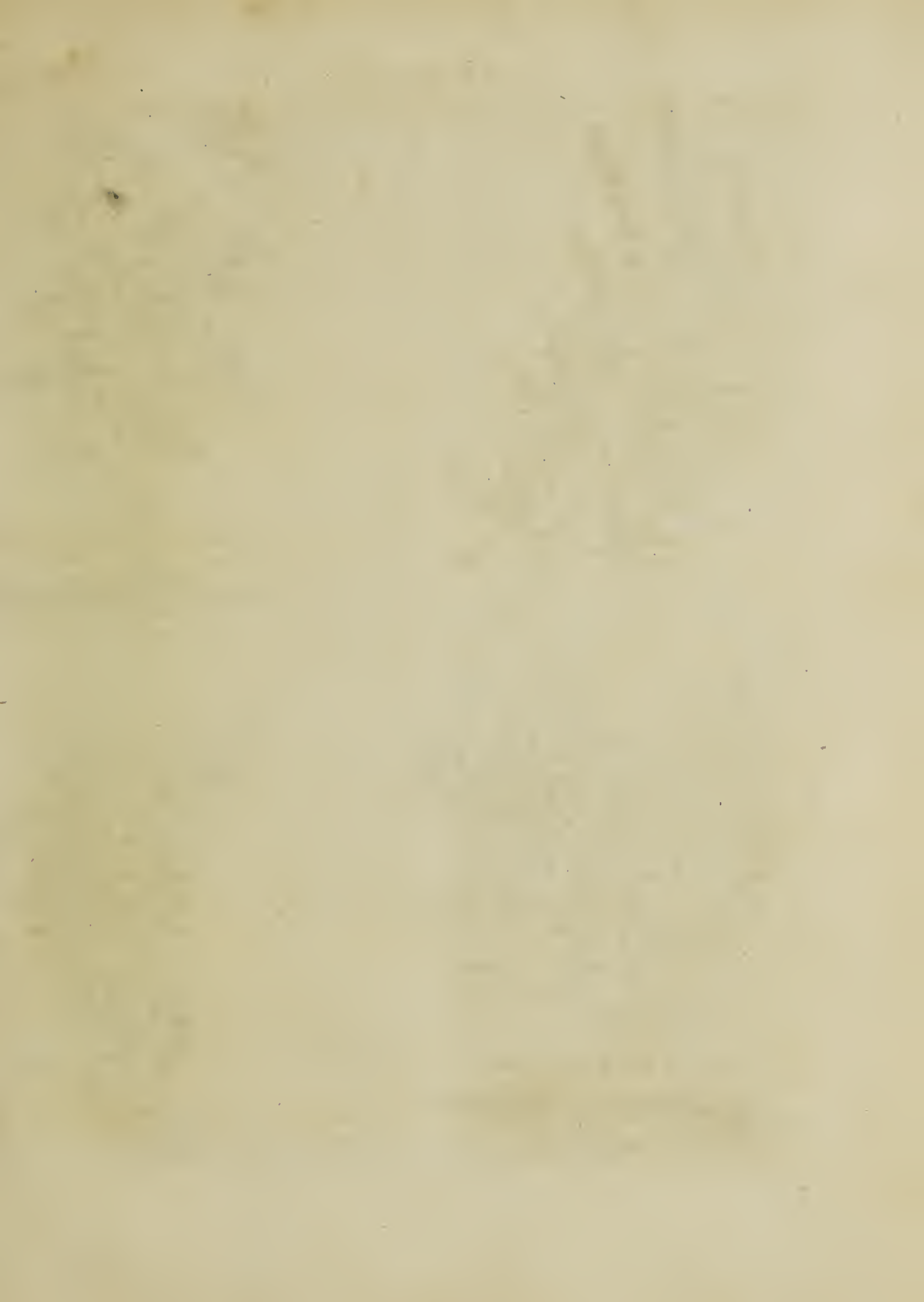
Fenugreek, which some call improperly *Senegrè*, and others *Bucera*, *Pomet.* or *Aigoceros*, because the Pods which enclose the Seed, resemble in some Manner a Goat's Horn, is a Plant which grows in several Parts of *France*. Its Stalks are round, hollow, of a darkish Colour, the Leaves small, roundish and indented, growing three and three together, after the Nature of the *Trefoil*; the Flowers small and white, which are succeeded by a large Pod, which is long and sharp, representing, as said before, a wild Goat's Horn. The Seed bears the Name of the Plant, and is the only Part of it which is sold by the Name of *Fenugreek*. This Seed ought to be fresh, of a lively yellow, towards a Gold Colour, but it becomes reddish and changes brown if long kept: It is about half as big as a Grain of Wheat, hard and solid, and is of something like a triangular Shape, but a little cut in, almost all round, near the Middle, and of a strong and very disagreeable Smell. The Farmers about *Aubervilliers* sow and cultivate this as they do *Coriander-Seed*: It is sent to *Paris*, and from thence to *Holland* and other Parts. The Ancients, and some *Germans* at this Time, make a Decoction of this Seed, and eat it as they do other Pulse, to remove and expel Wind; but I believe few or none will imitate them in this Practice, which is so disagreeable to the Nose and Palate: It is much better for Cattle, and especially Horses, to mix with their Oats to fatten them; But it is no good Nourishment for them, according to the Account of those who have experienced it.

It is principally used externally, as well in Decoctions as made into Powder and mix'd in Cataplasms that are intended as Resolvents and Emollients.

There is no farther Skill necessary in chusing *Fenugreek*, than to see that it be new, well sed, and of a good yellow Colour.

There are two Sorts of this Plant, but their Difference only consists in *Lemery*. that the second is something less than the first, but the Virtues are equal, both of them being emollient, discutient, and anodyne; so that almost all Cataplasms for those purposes consist in a part of the Mucilage of them. They are also used in emollient Clysters, for that they blunt the Sharpness and Acrimony of the Humours, especially in the Bowels.

[The





[The Plant which produces this is the *Fœnum-græcum sativum*. C. B. Pin. 348. Hist. Ox. 2. 166. The Stalks are single, slender and hollow, the Leaves green on the upper Side, and ash-colour'd beneath. The Pods long, slender, and swelling in the middle, each containing five, six or seven Seeds. It flowers in July, and ripens the Seeds in August, and then the Root perishes. They enter into the Composition of many of the Shop Plaisters and Ointments, and it may be added to the Account here given of their Virtues, that they mitigate the Pain of the Sciatica, and disperse Tumours of the Breasts.]

18. Of Luzerne, Burgundian Hay, or Trefoil.

Pomet. THIS is a Species of *Trefoil*, or *Saintfoin*, to which some have given the Name of *Medica* or *Median Hay*, because the *Greeks*, after the War with *Darius*, carried this Seed into *Greece*, and gave it the Name of its native Country, which was *Media*. This is a Domestick Plant, and very common in *Languedoc*, *Provence*, and *Dauphine*, all along the Banks of the *Rhone*, and in *Normandy*, from which Places the Seed is brought to *Paris*. This is a very luxuriant Plant, and produces abundantly, especially in the warm Countries; the Branches do not run along the Ground, as in several other Trefoils, but it has a round Stalk, reasonably thick, strait, and strong, adorn'd with several Shoots; towards the Top, spring a Quantity of Leaves ranged by three and three; and it grows about the height of a Foot and a half, and sometimes two Foot. From among the Leaves a purple Violet Flower rises, like that of the *Melilot*, and after that the Seed: This is almost round, but a little longish, and something pointed, of a pale yellow Colour when it is new, afterwards it turns red, and almost brown when it grows old. It is something less than the Seed of the Garden *Cresse*, and the Taste is something like it, but that it is not quite so hot.

Horses, Mules, Oxen, and other domestick Cattle, love this exceedingly, but above all when it is green, if you wou'd permit them they wou'd then eat of it 'till they burst; for which Reason the Farmers never dare give them a great deal of it at a Time. And tho' when dry it is very proper to fatten them, yet the Excess of it is always dangerous.

Parkinson calls this *Fœnum Burgundiacum*, sive *Medica legitima*, Ger. *Trifolium Burgundiacum*, in French it

is *Luzerne*, and bears it Leaves dispos'd three and three, like *Trefoil*, according to Mr. *Tournefort*: Its Root is very long, woody, moderately thick and strait, and will bear the Frost: It is not only cultivated in the warm Countries, as *Languedoc* or *Provence*, &c. but in the moderate Parts, about *Paris* and in *Normandy*. This Plant delights in a fat watery Soil, and may be mowed five or six times a Year: It is extraordinary to make Cattle fat, and Cows spring with Milk; contains a considerable deal of Oil, and a moderate Share of essential Salt; and is of some Service in Physick, to temper the Heat of the Blood, and other Fluids, and to provoke Urine, used as Tea, or in a Decoction with Water.

[This is the Seed of the *Medica Major erectior floribus purpurascens*. J. B. 2. 382. *Medica sativa siliqua contorta, magis Tortili* Hist. Ox. 3. 242. It is esteem'd Cooling and Diuretick, but never kept with us in the Shops, or heard of in Prescription.]

19. Of Agnus Castus, or the Chaste Tree.

Pomet. THIS *Agnus Castus*, which some call by the Name of *Vitex*, is a Plant which grows in Form of a Shrub, along by the Sides of Rivers and in Gardens; its Flowers are like those of the *Olive-Tree*, but that they are something longer: Its Trunk and Branches are woody, which end in several long Boughs, fine, pliable, and intermix'd with Leaves, Flowers and Fruit in its Season, which appears white at first, but becomes insensibly red. Some People call these Little Seeds Small Pepper, or Wild Pepper, as well because their round Figure renders them like Pepper, as because their Taste is a little biting and aromatick.

This Plant bears the Name of the *Vitex*, because its Branches are pliable, like those of the *Ozier* or *Willow*: And the Name of *Agnus Castus*, because the *Athenian* Ladies who were willing to preserve their Chastity, in the *Thesmophoræ*, the Celebration of certain Rights to the Goddess *Ceres*, made their Beds of the Leaves of this Shrub, on which they lay: But it is by way of Ridicule that the Name of *Agnus Castus* is now given to this Seed, since it is commonly made use of in the Cure of Venereal Cases, the common Consequences of Peoples having violated their Chastity. However the Seed ought to be chosen new, large, well-fed, and such as grew in the hot Countries, which is much better than that of colder Climates.

The Seed of this Shrub is round and grey, almost like Pepper, having something of the Taste and Smell,

and

and therefore is often called by the Name. It delights in wild uncultivated Places, near the Banks of Rivers, Ponds, and Brooks in the hot Countries, where it prospers best, and from whence the Seed ought to be chose, as much better than what grows in the Northern Parts: Take that which is fresh, large, and well fed; it is hot, attenuating, and dissolving, provokes to Urine, and excites the Monthly Courses; it softens the Hardness of the Spleen, expels Wind, and may be given in Powder, or a Decoction; and is likewise used externally by way of Poultice, &c.

[This is the Seed of the *Vitex sive Agnus Castus*. Ger. 1201. *Vitex foliis angustioribus cannabis modo dispositis*. C. B. P. 475. It is common in Italy, Sicily, &c. the Leaves are very beautifully divided as it were into Fingers of a Hand, the Flower white, the Fruit round and naked. It flowers in August: Authors do not seem well agreed about its Virtues. It has been however a Medicine in great Esteem, and a principal Ingredient in many Compositions, but is now grown quite out of Use.]

20. Of the Wild Cherry, call'd Mahaleb.

Pomet. **T**HIS Fruit, which some have named *Mahaleb*, is the Kernel of a small Berry, almost like a Cherry-stone, which grows upon a kind of a Shrub, which some Authors believe to be a kind of a *Phyllirea*. The Leaves are large, ending in a Point, and something resembling those of the Cherry-tree, among which the Fruit arises, covered with a small green Coat, extremely thin.

This is brought to us from several Parts, but especially England; and the best Choice to be made of it, is, by taking the freshest, largest, and that which is least fill'd with little Shells, and taking Care that it has no ill Smell; for there is some of it that smells so strongly, like Buggs, that it is hardly to be used. The Use of them is for the Perfumers, who, after they have broke 'em, mix them with common Water, Rose, or other distill'd Water, to wash their Soap with, in order to make Wash-balls.

Mr. Tournesort calls this *Mahaleb Cerasus sylvestris amara*: By others, it is called *Phamaccerasus*, and *Vaccinium Plinii*. It is a kind of Wild Cherry, or a small Tree almost like the common Cherry: The Wood is of a greyish Cast, inclinable to red, agreeable to the Eye, firm, and of a sweet Flavour, covered with a brown, or a blackish blue Bark: The Leaves are like the black *Poplar*, but much less: The Flowers resemble the ordinary Cherry, white, and each composed of five Leaves,

in Form of a Rose, of a good Smell. When the Flower falls, the Fruit succeeds, which is round, black, and of the same Shape with the Cherry, containing a Nut, or Stone in it, which yields a Kernel like the bitter Almond. Some People call this Fruit *Vaccinium*, and pretend it is that which *Virgil* speaks of in this Verse

Alba ligustra cadunt, Vaccinia nigra leguntur

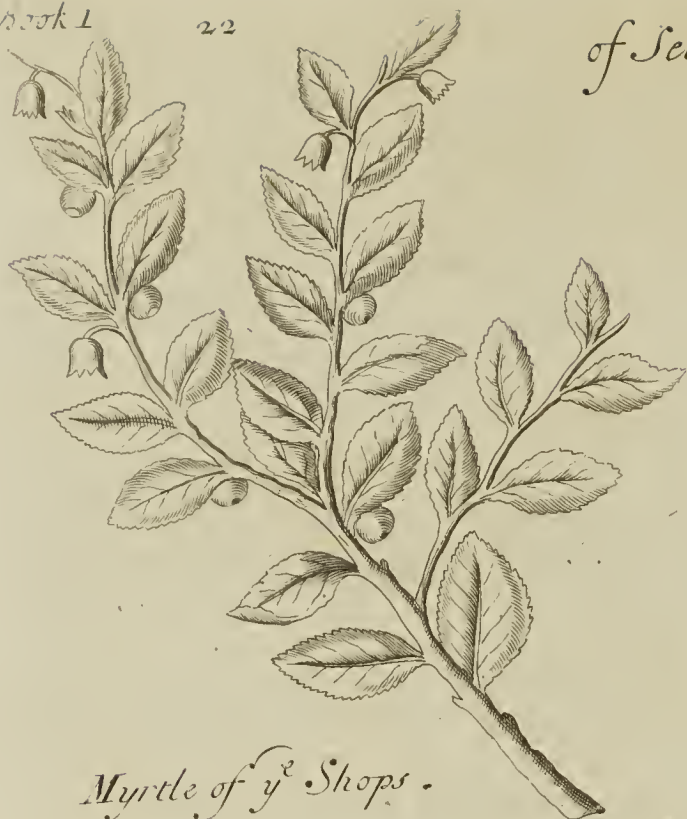
The Root is long, thick, and spreads itself into a great many Branches: The Fruit yields a good deal of Oil and volatile Salt: It attenuates, is emollient, sudorifick, and drying. The Use of it is for external Application, but is little in Practice. [The Tree which produces these is the Rock Cherry, the *Macaleb Gesneri* Ger. 1211. *Cerasus Sylvestris Amara Mahaleb putata*. J. B. 1. 227. It grows in stony Places, on Mountains, and flowers in May.]

21. Of the Avignon, or French Berry for dying, call'd Box-Thorn.

THE *Avignon*, which some call the *Yellow Berry*, is the Fruit of a *Pomet*. Shrub which Authors call *Lycium* from *Lycia*, where it grows plentifully, as it does likewise in *Cappadocia*: And it is sometimes call'd *Pyracantha*.

The Shrub which bears this Berry, grows in large Quantities about *Avignon*, and all the stony Places in the Country of *Venaissin*, and likewise in several Parts of *Dauphiny*, *Provence* and *Languedoc*. 'Tis a thorny Shrub, whose Branches are about two or three Foot long, the Bark grey, and the Root yellow and woody, the Leaves small, thick and disposed like those of the Myrtle, but of the Size of the Box; the Berry is about the Bigness of a Wheat Grain, sometimes consisting of three, sometimes of four Angles, and sometimes made into the Form of a Heart. The Colour is green, turning towards a yellow, of an astringent and very bitter Taste.

The Use of it is chiefly for the Dyers to stain a yellow Colour with: But the *Dutch* boil this in Water with *Roman* or *English* Allum, and the white Chalk they adulterate the Ceruus with, and make it into a Kind of Paste which they form into twisted Cakes, and when they are dry send them into other Countries under the Name of *Stil de Grain*; which to have its requisite Qualities ought to be of a golden yellow, tender, friable, and with as little Dirt in it as possible. It is used for Painting in Oil Colours and Miniature.



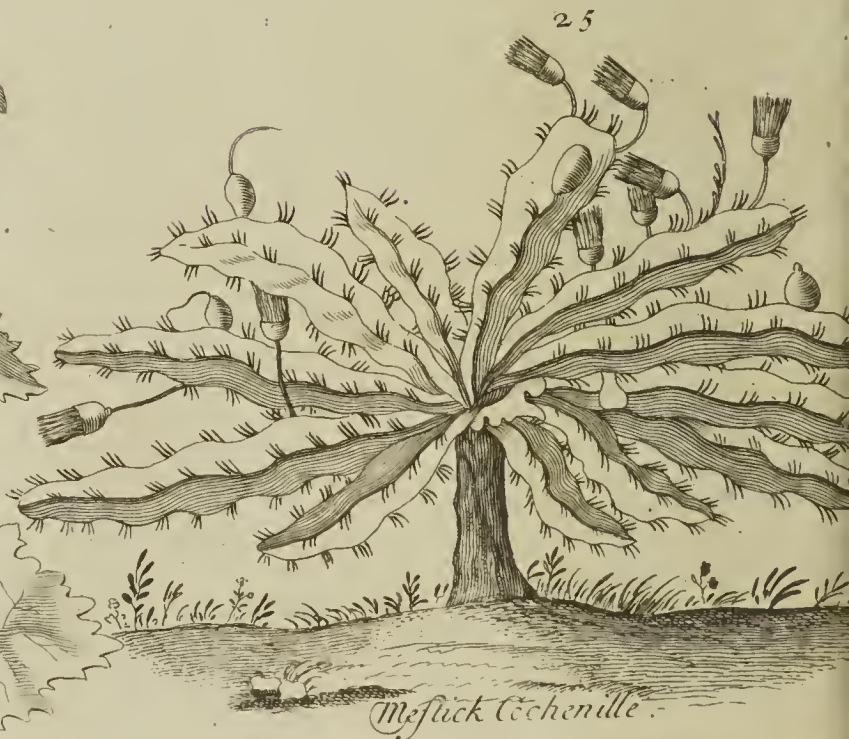
Myrtle of y Shops.



Staves-acre.



Musk Seed.



Mesick Cochenille.

By some this is call'd *Lycium Buxi* *Lemery. folio*, by others, *Lycium Alpinum*, and *Pixacantha*, or the yellow Berry; it is always transported dry, for the Use of the Dyers, who ought to chuse the freshest, largest, and best dried. All the Parts of this Plant are astringent, digestive and resolving. *Dioscorides* recommends an Extract made of the Roots and Branches of this which he calls *Caté* or *Lycium*: He assigns to this an astringent deterfive Quality, proper to dry up a gleet, or watering of the Eyes, to discuss and waste away Cataracts, for curing Ulcers in the Gums, for the Bloody-flux and Hemorrhages, whether internally, or externally applied.

[These are the Fruit of the *Lycium frve Pyracantha*. Ger. 1151. *Lycium Buxifolius rotundioribus syriacum vel persicum*. Breyn Prod. 2. 64. It is common in the hot Countries. What we once used in Physick was a Rob or inspissated Juice from the Leaves and Branches which *Dioscorides* gives the Method of making; but this while in use was generally adulterated, or made from the Berries of the Woodbine, Privet, Sloe, or some other Shrub: It is now grown wholly out of Use.]

22. Of Myrtle Berries.

THE *Myrtle Berries* are Seeds of certain Shrubs call'd *Myrtles*, which Authors have divided into several kinds, but I shall confine myself to two sorts, which are commonly known and cultivated about *Paris*; the one is the Male, and the other the Female: The first is much larger and thicker, and the Leaves of a pale Green, terminating in a point, smooth, fragrant, and three or four Times as big as those of the Female Myrtle, whose Leaves are of a dark green, and known by their being rang'd very near one another; besides, the Smell is much stronger and finer than that of the Male, and the Branches more yielding: The Flowers of both kinds are rose-fashioned, of a white Colour, tending a little to red, and arising directly in the middle betwixt two Leaves, to which the Berries afterwards succeed, which at first are green, but grow insensibly black, juicy, smooth, and are filled with a whitish Seed, enclosed in a Coat.

These Berries are made use of internally and externally. The Apothecaries make a Syrup and Oil from them, but they are little used in *France*. The *Germans* dye Blue with them, as the *French Berry* is used for yellow; but the *English* employ the Myrtle Leaves and Branches to the same, as they do the *Sumach*, for colouring their Leather, Skins, &c. The Berries which are now sold,

are of a black Colour, first well dried in the Sun, and then kept carefully for Use.

The *Myrtle* is a small Tree or Shrub *Lemery.* that is always green and fragrant, of which there are a great many sorts which are known by the Size of the Leaf, and the Colour of the Fruit. Mr. *Tournefort* says, that when the Flower is gone the Berry comes in the Cup, of an oblong, oval Form, representing a sort of a Crown when the Mouth of the Cup is turned downwards. This Plant is cultivated in our Gardens and Green-houses here, but is an Inhabitant of the hot Countries, where the Smell is much encreas'd; it contains a great deal of exalted Oil, Flegm, and some small Salt. The Leaves and Flowers have an astringent Quality, and are us'd for cleansing the Skin, for contracting the Flesh, strengthening the Fibres, &c. from thence a Water is made for the Ladies to wash with. The Berries have a binding deterfive Power, and the chymical Oil from thence is excellent for the Hair, and used in Pomatuins, and most other external Beautifiers of the Face and Skin.

[These are the Berries of the *Myrtus bœtica Sylvestris*. Ger. Em. 1412. *Myrtus communis Italica*. C. B. Pin. 468. They have been frequently subject to be adulterated with the Berries of the *Vitis Idæa Angulosa* J. B. Which as *Buxbaum* observes have thence got the Name of *Myrtilli*. They are rough and astringent, are not much in Use inwardly, but are in the Composition of several of the strengthening Plaisters.]

23. Of Staveacre.

THIS is the Seed of a Plant which grows commonly in many Parts of *Pomet. Provence* and *Languedoc*. The Leaves of the *Staveacre* are large and green, deeply indented and thick; the Flower is of a Sky-blue, and grows in a Husk, which afterwards contains the Seed, and is of a blackish Colour at Top, very rough on the outside, and of a whitish yellow within; the Taste biting bitter, and very disagreeable. Chuse such Seed as is new, clean, and come off of good Ground. The Use of it is chiefly to destroy Vermin, especially those of Children, to raise Blisters, or allay the Anguish of the Tooth-ach, when it has been boil'd in Vinegar. It is also used to cleanse, and consume proud Flesh in old Ulcers; but it is a dangerous Thing to tamper with, and I wou'd advise such as don't thoroughly understand it, to let it alone, as there is great Hazard attends the using it, and there are other Remedies enough to do the same good, without the Danger.

It

It is call'd *Staphisagria*, *Herba Pedicularis*, by Mr. Tournefort, *Delphinium Platani Folio*, *Staphis agria dictum*, or in English Loufe-Herb. It raises its Stalk about a Foot and a half, or two Foot high, upright, round and blackish. Mr. Tournefort says, the Flowers are composed of many unequal Leaves, and follow'd by a kind of rough three-corner'd Seed: If taken inwardly, which is but seldom, it purges and vomits: It is used in its Powder, tho' rarely. 2dly, As a Masticatory for the Tooth-ach. 3dly, A Gargarism to purge Flegm. 4thly, An Errhine to bring forth Flegm and Water by the Nostrils. 5thly, To mix it with an Ointment with Lard to cleanse Wounds. 6thly, A Mixture with Oil of Almonds, to kill Lice in Childrens Heads, which is its chief Use: So also with Vinegar. It is of a churlish Nature, and not fit to take inwardly.

[The Herb which bears it, is the *Staphis agria* Ger. 398. The *Aconitum urens Ricini fere foliis, flore cœruleo magno Staphis agria dicta* Pluk. almag. 357. The Seeds are a strong Purge taken in the Quantity of ten, or twelve Grains, but few People care to use them; and our Quincy ranks them with the *Nux Vomica Cocculus Indi*, &c. and says they are all much of the same Nature.]

24. Of Amber, or Musk-Seed.

THIS is a small Seed, of the Size of a Pin's-head, of a greyish sad brown Colour, in form of a Kidney, of a Musk or Amber Smell, especially when it is new, which gives it the Name. This Plant which grows strait is adorn'd with a green Velvet Leaf, like that of the Marsh-Mallow, whence 'it is call'd *Alcea Indica Villosa*, which signifies *Indian Velvet Mallow*: It bears yellow Flowers in form of Bells, which are succeeded by triangular Husks, brown on the outside, and white within, of a Finger's Length, in which the Seed is enclosed. Chuse that which is fresh, clean, dry, and of a good Scent: It contains a large Quantity of exalted Oil and volatile Salt; such as comes from *Martinico*, is abundantly more fragrant than that which grows in any other of the *Caribee* Islands. This Plant grows likewise in *Egypt*, where it is call'd Musk-seed and *Abelmusk*. The Perfumers use this all over *Italy*, and the Bead-makers in making their Beads.

This Seed is something like the *Mil-Lemery*. It, of a bitterish Taste, and is brought dry to us from *Martinico* and *Egypt*; it comes from a kind of *Ketmia*, and is call'd by Tournefort, *Ketmia Ægyptiaca Semine Moschato*. This Plant carries its Stalk a Foot and a half

high; the Leaves are of an unequal Size, but cut and indented very deep. The *Ægyptians* use this internally as a Cordial, to fortify the Heart, Stomach and Head, and to provoke Lust: It gives a grateful Scent to the Breath after Eating, but is not proper for such as are subject to the Vapours.

[The Plant which bears it is the *Alcea Ægyptiaca villosa* C. B. Pin. 317. *Althea Ægyptiaca Moschata Abel Mosch dicta*. Hist. Ox. 2. 533. And it is from another Plant of this Class that the *Indians* make the Bang with which they intoxicate themselves, as Dr. Paul Herman affirms, who was upon the Spot, and saw what he relates.]

25. Of Cochenille.

THE *Cochenille*, call'd *Mestich*, is the Seed of a Plant about two or three Feet high, adorn'd with Leaves two Fingers thick, of a beautiful Green, and very prickly; among which grow Husks in form of a Heart, of a green, tending to a yellow Colour, in which are enclosed a Quantity of small Seeds of the size of a great Pin's-head, in shape sometimes flat, sometimes triangular, but always rough, of a greyish silver Colour to the Eye, and as red as Blood within. The Plant which bears them is call'd *Opuntium*.

We bring this Seed from *Peru* and other Places of *New-Spain*, as the Gulf of *Mexico*, from whence it is brought by the *Spanish Galeons*, or Plate-Fleet to *Cadiz*; as *Ipecacuana*, the *Cortex*, *Sarsa Parilla*, and other Drugs are; and from thence transported to *England*, *Holland*, or *France*.

The *Mestich Cochenille* is a Thing of that prodigious Consequence to the *Spaniards*, that they would undergo any Punishment, rather than yield that it should be propagated in *France*.

There are very few Persons but what believe that this *Cochenille* is a little Animal or Insect; and I was of the same Opinion, 'till convinced of the Truth of the contrary, by two Letters of the *Sieur Francis Rousséans*, a Native of *Auxerre*, dwelling at *Leoganna*, near *St. Domingo*, who writes to me thus:

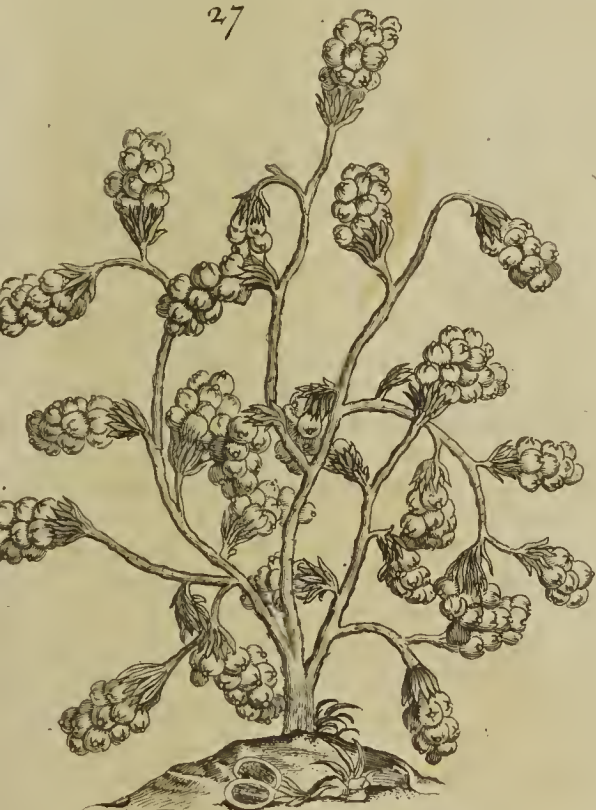
“ The *Cochenille*, Monsieur, which you are desirous to know by the Plant, grows about two or three Foot high, furnish'd with Leaves of two Fingers Thickness, of a fine green Colour, full of Thorns on all Sides; the Seed is small, and contain'd in Husks form'd like Hearts, turning to a Yellow when they grow ripe. What is brought to *Spain*, comes from all those Parts call'd the *Salt-Sea*, for the little we have about *Leoganna*, is not worth speaking of.”



Cardasoe Cochenille.



The Kermes Insect on the Ilex.



The Raisin. Incomum.



Rose of Jericho.

We may see this is quite contrary to what is reported by Monsieur de Furetiere, who confounds the scarlet Grain, which is *Kermes*, with the *Cochénille*; and, at the End of his Discourse, observes that it is a greyish Worm, or Insect, which comes from the *Indies*, and which they traffick considerably in; so that from *Tlascala*, a City in *Mexico*, they deal for more than two hundred thousand Crowns a Year. And, after him, the Reverend Father Plumier, a Minime Friar, told me, the 15th of September 1692, from his own Mouth, and certify'd under his Hand as follows:

“ The *Cochénille*, says he, surnamed *Mestich*, is a small Insect like a Bug, which is found upon many different Sorts of Plants, as well in *New Spain* as the *American Isles*: These little Animals are so common in the Countries thereabout, that they make a Sort of Crop of them.

“ All Kinds of Plants are not equally proper to supply these little Animals with Aliment capable to produce a thorough Redness; therefore the Inhabitants of those Parts feed their small Cattle upon the *Opontium*, the Juice of which is red, which they feed on, and which contributes very considerably to strike the Colour deep, which the Dyers seek after; and, as the Ants delight exceedingly in these little Insects, the *Spaniards* take care to fill those Places full of Water, by Ditches, where the Plants grow, whereof we have been speaking, to prevent the Ants from going thither.

“ The chief Plant on which we find the *Cochénille*, is that which the *Americans* call *Raquette*, or *Cardasse*; and the Botanists *Opontium majus spinosum fructu sanguineo*; which signifies the large *Indian* prickly Fig, whose Fruit is as red as Blood.

“ This Plant is wonderful in its Kind, in this, that it is wholly compos'd of a Quantity of large, thick Leaves, which are of an oval Figure, a glorious Green, cover'd with long Thorns, very sharp, of a yellow Colour; and at the End of the Leaves grow large Flowers, of a pale Rose Complexion, follow'd by a fine red Fruit. These little Insects, of which they make the *Cochénille* brought to us, are of a Silver-grey, but of that particular Kind, that they multiply after a prodigious Manner, so that a Hundred will produce Millions.

On the 30th of January, 1693, the said Father Plumier brought me a Letter writ by himself, to this Purpose:

Father Plumier's Declaration concerning Cochenille.

“ The *Cochénille* which is brought from *New Spain*, or the Continent of *America*, is an In-

“ sect of the Size and Form of a Bug, which clings to several Sorts of Trees, but more particularly to the *Acacia*, or to certain Trees, which the People of the *French Islands* call *Cherry Trees*. It is a very fruitful Animal, and carries between the Thighs, and on its Breast, an infinite Number of Eggs, which are almost invisible, yet produce an innumerable Quantity of very small red Insects, which the Ants are very fond of eating. When the old ones are crush'd, they yield a red Juice inclinable to Scarlet, mix'd however throughout with a little Tinge of Yellow; so that those which are bred upon the Trees, do not produce so fine and lively a Colour: But the *Indians*, to render the Juice of a beautiful Colour, breed these Insects upon certain Plants, which are call'd in *Latin* *Opontium*, and which the *French* call *Raquettes*. These produce a thick Fruit, like our Figs, full of an admirable fine red Juice, of which the *Cochénilles* feed; which is the Occasion that the *Cochineals* cultivated on these Plants have a finer and higher colour'd Juice than those which live on any others. When I discover'd these Insects in the Isle of *St. Domingo*, I shew'd them to two *Indian* Slaves, that were Natives of the Country where they breed, and they assur'd me both, that these were those they made *Cochénille* of.

“ Being on my Return from my Voyage to *St. Domingo*, I was desirous to set myself right about this Insect, from the Authors who have writ of *America*; and here follows what I found in the *Sieur de Laet's* Description of the *West Indies*. Book V. Chap. 3.

“ The *Cochineal* Grain comes from several Provinces of *New Spain*, taken from the Tree call'd *Tuna*, which bears very thick Leaves, on which it grows in Places more expos'd to the Sun, or cover'd from the *North-East* Wind. It is a very little Animal, living as an Insect much like a Bug; for when it first clings to the Tree, it is less than a Flea, and comes from an Egg the Size of a Mite, call'd, in *Latin*, *Acarus*: They fill the Tree, and spread over the whole Garden, and are gather'd for Use once or twice a Year. These Plants are dispos'd in Order, as they do the Vines in a Vineyard; and the younger they are, the more plentifully they bear, and afford a better Grain; but it is necessary to preserve them from being destroy'd by other Insects, and no less from Pullen, which will eat them.

“ Note, This *Tuna* is nothing else but the said *Opontium*, of which I spoke before; there are several Sorts of it, but the Choice for cultivating *Cochineal* ought to be made of such whose Fruit produces the finest red Juice.”

D

Howeve

However, not being able to bring myself to agree to what Mr. *De Furetiere*, the Reverend Father *Plumier* and *Laet* have writ, I find myself more and more obliged to believe that *Cochineal* is the Seed or Grain of a Plant, because the *Sieur Rousseau* takes Notice to me, at the End of his first Letter, in order to justify what he says, That he would send me the Plant, which he hop'd to do, with God's Assistance: And in his second Letter, dated the 25th of *May*, in the same Year, he writes thus:

S I R,

"IN relation to the *Cochineal*, about which I
 " have been speaking, I must tell you a pleasant
 " Story, of a certain *Minime* Father, who calls
 " himself a Botanist. He is about 45 or 50 Years
 " old, of a blackish Complexion, whom one might
 " naturally judge a Man of Knowledge, if he
 " never spoke. He saw several *Acacia's*, which
 " are very prickly or thorny Shrubs; and what they
 " call *Cardasses*, which are a Sort of Plant that
 " bears Leaves of two Fingers Thickness, made a
 " little like the *Raquettes*, which produces Fruit
 " of the Shape of a Fig, of a Taste a little acrid,
 " and which makes the Urine red: Certain Ani-
 " mals that frequent these Trees, he affirm'd,
 " were the *Cochineal*, and made a great deal of
 " Laughter among the Inhabitants of *St. Domin-*
 " *go*. This lost the Credit the good Father had
 " there, especially with Mr. *De Cussi*, who had
 " his Share, among the rest, in the Diversion
 " they had from what the good Father said. He de-
 " parted for *France* sometime after, where I know
 " he arriv'd with the same Error concerning *Co-*
 " *chineal*, that he had been in at *St. Domingo*."

The *Sieur Rousseau* inform'd me again, that he had found upon the *Acacia's*, a Species of little Creatures of the Size of a Bug, which they call'd *Vermillion*; these are a little thicker, but they are of no Use, because they cannot dry them; 'tis apparent, as we may rationally conjecture, that this was the pretended *Cochenille* of Father *Plumier*.

Besides the Letters of the *Sieur Rousseau*, there are other Things which deserve our Credit; as, that we cannot discover the Feet, Wings, Head, or any other Part of an Animal in the *Cochineal*, which we have; and that it has in it all the Marks of a true Seed. And if these Proofs are not sufficient, we may look into the Judgment of *Ximenes* and *William Piso*, in his History of the Plants of *Brasil*; where, after he has given a long Description of the Species of the *Indian Fig*, which is call'd *Jamacan*; he says it is the same Plant that in *New Spain* produces and bears the *Cochineal*.

We ought to make Choice of the *Mesteck Cochineal*, of a good Sort; that is, such as is plump, large, well fed, clean, dry, of a Silver shining Colour on the Outside, and when it is chew'd in the Mouth, that tinges the Spittle of a bright red Colour; and reject that which is lean, dirty, and light; and take particular Care, lest there be small Stones among it, which is a very common Case, especially when it is dear.

The *Cochineal*, when dry, is of good Use in Medicine; but is abundantly more used by the Dyers, as their principal Basis for the Scarlet Colour. Some People use it to colour Sugar, adding a little Cream of Tartar in fine Powder, or some other Acid.

Of Carmine.

Carmine is a very precious and rich Commodity, which is made of *Mesteck Cochineal*. 'Tis a Flower or Powder of a most beautiful red Gloss, and that feels like Velvet, which is made by means of a Water, in which the Seeds of *Chouan*, and the *Autour Bark*, a Bark brought from the *Levant*, and having something the Appearance of Cinnamon, but of an insipid Taste, have been infused; and which, when prepar'd and dry'd, is call'd *Carmine*; which, to have the requisite Qualities, ought to be an impalpable Powder, of a high Colour, and such as has been as properly and faithfully made as possible: But as its great Price is the Occasion of wicked Peoples sophisticating it, one ought never to buy it but of such Merchants as are above such Frauds, or above selling the second Sort for the first, which is extremely finer. Some are for *Carmine* of *Rocou*; but it gives a Tinge more of an Orange Colour. The Use of *Carmine* is for Miniature, and making the finest red Draperies.

Of fine Lake, and other Sorts.

The fine *Lake* is that which takes its Name from *Venice*; because what has been sold among us hitherto, is brought from thence: But at present several Persons in *Paris* make it to answer effectually; so that a great many Painters prefer it to that of *Venice*. This *Lake* is a hard Paste, made from the Bone of the *Cuttle Fish*, which is colour'd with a Tincture drawn from *Mesteck Cochineal*; of the Wood of *Brasil*, of *Fernambucco*, burnt *English Allum*, *Arsenick*, and a *Lixivium* of the *Natrum* of *Egypt*, or white Tartar; by means of Cloth they strain it, and proceed as in the making of Indigo: From thence reduce it into a Paste, of which they make Troches, and dry them for Service. The Use of this *Lake* is both for Miniature and Painting in Oil.

Of the Dove Lake.

This is made likewise with *English Allum*, and form'd into Pastiles of the Thickness of one's Finger, and so dry'd. That of *Venice* is abundantly finer than that of *Holland* or *Paris*, because the White that the *Venetians* use, is much finer and properer to give a lively Colour than the White of *Holland* or *France*. The Use of this *Lake* is likewise for Painting. There is a third Sort call'd *Liquid-Lake*, of which I shall speak in the Chapter of *Fernambucco-Brasil*.

Of fine Turnesol in Linen.

The fine *Turnesol* of *Constantinople* is made of *Holland*, or fine *Cambrick*, which has been dy'd with *Cochineal*, by means of some Acids. This is us'd for tinging of Liquors, as *Aqua Vitæ*, or the like. The *Turks*, and others in the *Levant*, call this *Turnesol Linen*, the red *Bizerere*.

Of Turnesol in Cotton, or that of Portugal, vulgarly called Spanish-Wool.

The *Portuguese* bring this to us in Cotton, which is of the Figure, Thickness and Size of a Crown-piece; they use it to colour their Gellies, but it is much less us'd than the *Turnesol* in Linen; it ought to be of a fine Red, the dryest and cleanest that can be had; and these are all we have from *Mesteck Cochineal*.

The other Sorts of *Cochineal* are the *Campechy*, the *Tetrachalle*, and the Wild.

The *Campechy-Cochineal* is no other than the Siftings of the *Mesteck*; the *Tetrachalle* nothing but the earthy or droffy Part of the *Campechy*; and the Wild or Seed *Cochineal*, that which we find upon the Roots of the great *Pimpernel*, call'd by the *Botanists*, *Pimpinella Sanguiforba*.

[*Cochineal* is the *Cochinilla de Lact.* 229. *Cochenilla Hispanis Breyn. Hist. Cocc.* 6. *Nepalnocheztli seu Coecus Indicus in Tunis quibusdam nascens Hern.* 79. It is a small Insect, brought us dry'd from *Mexico*, the only Place in the World where it is propagated for Use.]

There is not, perhaps, any Drug about which there have been more Disputes among Authors than this: It was at first long believ'd to be a Vegetable Production; and when that Error was got over, and the World was perfectly convinced that it belong'd to the Animal Kingdom, there were yet a Number of mistaken Opinions about its Nature and Origin. It was a long Time believ'd to be of the Beetle Kind, and to resemble what we call the *Lady Cow*; nay, some have

been so hardy to affirm, that it was that very Creature: And an Author of some Credit, in Conformity to this Opinion, gave Figures of it in the different States of an Hexapode Worm, *Aurelia*, and perfect Beetle; Changes necessary to support that Account of its Nature, but such as the Creature never knows. The accurate and indefatigable Mr. *Leuwenboeck* came nearest the finding its true Production, in his Examination of its Eggs, in which he always discover'd a six-footed Animal: But we never were truly acquainted with its Nature and Origin, 'till the accurate Mr. *De Reaumur*, in his Memoirs, *Pour servir a L'Histoire des Insectes*, undertook to give the History of it. That excellent Author has referr'd it to a Class of Animals unknown 'till his Discoveries, and, by him, call'd *Progallinsects*.

Its general History from him, and from the Accounts of intelligent People, who have seen it in *Mexico*, which agree very well with his Opinions, is then, in few Words, that it is a six-legg'd, viviparous Insect, of which the Female is only us'd, which is produced from the Egg in its perfect Form, and has no Transformation, as it is call'd, afterwards. It is very different from what the Accounts of all the older Authors have said of it, and like no other Insect, but those of the same Class. It has no Wings, nor any Use for any; its whole Life, except a few Weeks after it is hatch'd, being spent in one Place, where it is fix'd to the Vegetable it feeds on: The Male is suppos'd to be a small Fly, but is wholly unknown among us, the Female only being what we call *Cochineal*.

The great *Plumier*, therefore, whom this nameless Author attempts to ridicule, was perfectly in the right, and has the Honour to have been the first who spoke with any Degree of Propriety of this Drug; for his comparing it to a Bug, is much more just, than the later Opinion of making it a kind of *Lady Cow*, to which it has not the least Resemblance.

[What our Author calls the wild *Cochineal*, is the *Coecus Radicum*, *Breyn. Coecus tinctorius Polonicus quibusdam Progallinsecte des Racines Reaum. T.* 4. p. 116. It is an Insect of the same Class with the *Cochineal*, which remains the greatest Part of its Life fix'd to the Root of the *Polygonum Polonicum Cocciferum*, *L. B.* 3. 378. *Knawel incanum flore majore perenne R. Hist.* 1. 213. *Knawel folio et flore candicante Rupp florgen.* 26. It is also found on the other Plants, and in other Places besides *Poland*; but there, and on that Plant, most abundantly.]

26 Of the Scarlet Grain, or Alkermes.

THE Scarlet Grain, which the *Pomet.* Latins call *Grana Tinctorum*, the Greeks, *Coccus Insectorius*, and the Arabs, *Kermen* or *Kermes*, is the Seed, or rather Excrement of a little Shrub, whose Leaves are prickly, almost like those of Holly, except that they are much less. They are found in great Quantities in *Portugal*, *Spain*, *Provence*, and *Languedoc*.

I shall not stay to describe the Shrub which bears this Grain, all Sorts of Authors having made mention of it: I shall only observe, that what we call the *Grain*, that is, the *Kermes*, is fasten'd to both the upper and under Side of the Leaves of this Shrub: And when it is a good Year, it is one of the principal Riches of the Countries where it grows, especially for the poor People, throughout all *Provence* and *Languedoc*; where it costs them nothing but the Trouble of gathering, and they sell it by the Pound to the Apothecaries; who, from the Pulp, make a Syrup they call *Alkermes*, and the Remainder which is left in the Sieve or Strainer, after it is cleans'd, they sell again to the Dyers, for as much as it cost them at first. Those which they would transport, or send to other Places, they dry, as well for physical Use as the Dyers, who use great Quantities of it; for which Purpose they chuse the largest and most weighty, and that which is new, that is to say, of that Year, with its outer Rind, the reddest and cleanest that may be; for when it begins to grow old, an Insect breeds in it which eats through the outer Rind, and hollows the Grain in such Sort, that it is all Worm-eaten, very light, and has nothing remaining of what it was but a simple Skin, which greatly diminishes its Virtues. That of *Languedoc* passes for the best, being commonly large, and of a very lively Red; which is contrary to that of *Portugal*, which is less esteem'd, as being smaller, leaner, and of a blackish Red.

The *Alkermes*, or *Scarlet Grain*, is reckoned very cordial, and proper to comfort Women in Child-bed, giving half a Dram of it in Powder, in an Egg, and not *Cochineal*, as many order, because they believe these two Drugs to have the same Virtues. It is also us'd in Dying. The *Spaniards*, &c. who gather this, wet it with Vinegar, to kill certain little Worms that are in it, and then dry it.

It is proper here to remark the Impropriety with which this Drug is call'd *Grain*, or *Seed*; it being no other than small Bladders, which are form'd on the Leaves and Bark of a little Shrub, well known in the Places before nam'd; for Proof

of which I shall declare what the first Physician inform'd me of by Letter, *December 22, 1694*: The *Kermes* is not a Seed, but the Shell of a little Worm, which produces it by pricking the Bark of the *Ilex* or *Holm Oak*, on which it is frequent, and incloses itself in the Juice that flows out at the Wound, as the Worms which are the Occasion of Galls.

The Fruit of this *Ilex* is not the *Kermes*, but an *Acorn*, like those of the other *Ilexes*; and this is incontestible: So that the *Kermes* should not be called a *Seed*, but a *Shell* or *Bladder*.

Of the Scarlet Pastel.

As to the *Scarlet Pastel*, which is the Powder that is found in the Grain when new, it ought to be of a very fine Red, of an agreeable Smell, and ought not to be made up with Vinegar at all, as that commonly is which comes from *Portugal*, which is done to encrease its Weight, as well as to give it a fine Colour. This Cheat is easy to discover, because it will be moist, and yield a strong and very disagreeable Smell. This *Pastel*, which is the most noble Part of the Seed, is never us'd at all in Physick, for want of Knowledge of it; but very much by the Dyers for their high Colour.

Of Syrup of Alkermes.

The Syrup of *Alkermes* is the Pulp of the fresh *Kermes*, and the Powder Sugar of *Brasil*, or the small Loaf-Sugar reduced to Powder, and mix'd together; afterwards they melt it over a gentle Fire, then put it into little Barrels made of white Wood, such as we receive it in. Great Quantities of it are made, as well at *Nismes* as *Montpellier*, which they send to most Parts of *Europe*.

Of the Confection of Alkermes.

The Syrup of *Kermes* is very little us'd in Physick; but when it is incorporated into a Composition made of the Rennet Apple, Rose-Water, Raw Silk, and White Sugar, Powder of Oriental Pearl prepar'd, Yellow Sanders, fine Cinnamon, Azure Stone prepar'd, Leaf Gold, a thin Electuary is made of it, which we call Confection of *Alkermes*. Some add Musk and Ambergrease; but this ought never to be done unless by the Advice of a Physician, as these Perfumes are what many Women cannot bear. As to the Manner of preparing this Confection, those that are desirous to make it, may consult the Dispensatories that treat of it; but we have it ready made from *Montpellier*, as the best, because of the Newness of the Juice, which they have there at Command, and which they transport to other distant Parts.

But

But there are a great many Frauds impos'd upon the World, particularly in *France*, under the specious Name of *Confection of Alkermes from Montpellier*; therefore 'tis better for all Druggists, Apothecaries, and the like, to buy the Juice or Syrup uncompound'd, to prevent their being otherwise deceiv'd.

Monsieur *Charas*, in his Dispensatory, p. 314, attributes mighty Virtues to the true Confection of *Alkermes*, and says, that the said Confection is, without doubt, one of the best Cordials that was ever discover'd in the *Galenical* Physick; for it recruits and refreshes the vital and animal Spirits, allays the Palpitation of the Heart and Syncope, very much strengthens the Brain, and other noble Parts, and is an Enemy to Corruption, preserves the natural Heat, drives away Melancholy and Sadness, and maintains the Body and Spirits in a good Condition. It may be taken by itself, or in any other Liquor, from a Scruple to a Dram or two.

The *Kermes*, *Coccum Insectorium*, *Lemery*. *Granum & Coccus Baphica*, has a thick Shell or Husk, like the Juniper-Berry is round, smooth, shining, of a fine red, fill'd with a Juice of the same Colour, of a vinous Smell, the Taste a little bitter, but agreeable. The Tree which produces it is a little Shrub, whose Leaves are like the Holly, but less, and more indented on their Sides with prickly Thorns: The Branches bear Abundance of Shells as well Flowers, which afterwards turn into Fruit, which grows in separate Places. The Fruit is oval, and thick, cover'd at the Top with a black Cap: The Skin of it is of the Nature almost of Leather; it contains a Kernel which is divided into two Halves. This Shrub grows in the hot Countries, as was said before.

The Origin of the *Kermes*, proceeds from a Kind of little Worm in the *Holme*, or green Oak, on which they feed; it produces a Cod which is fill'd with Juice, and which is very red when it is brought to us. This little Insect is inclos'd in the Cod. We have had a very curious Discovery of this, from Mr. *Fagon*, chief Physician to the King; and it is confirm'd by a Circumstance, which is apparent when the *Kermes* is dry'd, for then it is fill'd with a vast Quantity of Worms and Flies, almost imperceptible, which convert all the internal Substance of the Berry into little Insects, and leave nothing but a light Husk or Skin behind. 'Tis easy to apprehend that these little Worms, &c. come from the Eggs which the first Worms which enter'd the Cod produc'd. To remedy this Accident, which so much concerns the good Effect of the *Kermes*, every one ought to let the Cods lie some Time in

Vinegar before they are dry'd, by which Means the acid Liquor will destroy those little Worms.

[*Kermes* is the *Chermes seu Coccus insectorius*. *Paik*. 1395. *Chermes, Grana Tinctorum, Coccus baphica, Coccus Insectorum*. *Mont. Ex.* 9. *Kermes sive Chermes*. *Ind. Med.* 43. It is an Insect brought to us from *Provence* and *Languedoc*, where it is found on the *Ilex Coccigera*, or Scarlet Oak. The *Ilex Aquifolia sive Coccigera*. *Paik*. 1394. *Ilex aculeata Cocci glandifera*. *C. B. Pin.* 428. *Tourn. Inst.* 583.

There have been almost as many and as various Opinions about the Nature of this Drug, as of the former: It has been guess'd by many to be a Vegetable, and by many others to be an Animal Substance; and not only Mr. *Fagon*, but since him the Count *Marsigli* has also endeavour'd to prove it to be a Vegetable Excrecence.

The first who open'd a Way to the true Discovery of what it was, were Mess. *De la Hire* and *Sedileau*, in the Accounts they gave of the Green-House Bug, as we call it; an Insect of the same Kind very common on Orange-Trees: Mr. *Cestori* after them gave also very great Light into it; but the true and accurate Account of its Nature and Origin we owe to the same celebrated Mr. *De Reaumur*, who, from the Observations of other eminent Naturalists, and his own Experiments, determines it to be of a Class of Insects little understood before his Time, and which he calls *Gallinsects*.

The Male of this Species is also a small Fly, but the Female without Wings, and fix'd as the *Cochineal* to the Tree it feeds on. It is wonderfully prolifick, often containing not less than two thousand Eggs, every one of which produces an Insect in its perfect Form, and the Females subject to no Kind of Transformation afterwards.

The Confection was originally a Composition of *Mesue*, but has undergone many Alterations since. Our College Dispensatory has order'd it in a more simple and easy, and at the same Time a much better Way than any of the former; which is as follows: Take Rose-Water two Pound, Juice of *Kermes* three Pound, fine Sugar one Pound; boil these almost to the Consistence of Honey, and then stir in the Powders of *Cinnamon* and *Lignum Aloes*, of each six Drams.]

27. Of Anomum in Berry, and the Rose of Jericho.

THE *Anomum Racemosum*, or that in Clusters, or the Raisin *Anomum*, is a Kind of Fruit we receive by the Way of *Holland* or *Marscilles*: It grows in several

several Parts of the *East-Indies*; we seldom see it in Bunches, but much oftner in the single Pod.

It grows upon a Shrub whose Leaves are of a pale Green, longish and narrow; it is, in some Sort, like a Muscat Grape in Colour, Size and Figure, but it is much fuller of Seed, and has less Juice in it.

It is also particular in this, that all the Pods being without Stalks, are strongly stuck, and as it were glued against a long Nerve, which they encircle round to its End almost, and which serves them for Basis and Support, like the Grains of Pepper: The Top is terminated by a Kind of Button, and it is generally divided into Cells.

On Opening these Pods we find them full of square purple Seeds, join'd and, as it were, glued to one another, making altogether a round Figure, conformable to that of the Pod, and which are cover'd with a white Film very delicate, and divided into great Heaps by a like Membrane, but in such a Manner as makes it easy to separate them: Their Taste is sharp and biting, and their Smell extremely piercing and aromatick.

Chuse the freshest Seed you can get, with the roundest Husk, and of the most lively fair Colour, heavy, and well fill'd. Cast away what is light and open, containing a black wither'd Seed; but esteem those that are well fill'd with Seed, large, plump, of a warm picquant Taste, very aromatick, and the most resembling the Cardamoms: It contains a great Quantity of volatile Salt and exalted Oil.

The chief Use of the *Amomum* is for Treacle, such as that of *Venice, London, &c.* for which make use of the cleanest and best fed Seed. It is also used to incide, digest, resist Poison, expel Wind, strengthen the Stomach, give an Appetite, and promote the *Menses*.

Several Persons do not know this Drug-but under the Name of the great *Cardamom*, which is no other but the *Grain of Paradise*, of which I shall take Notice in the following Chapter. There are other Seeds which bear the Name of the *Amomum*, as that of *Pliny*, which is a red Fruit, and altogether like that which is within the Fruit of the *Alkeking*, which grows on a Shrub which is very common. There is another Sort which the *Dutch* and *English* call *Amomi*, and we *Jamaica-Pepper*, which is the Fruit of an *Indian Tree*, as will be seen in its proper Place. I must advertise you, that when you meet with the Name of *Amomum*, or *Amomi*, in Authors, you ought to use no other than this cluster'd *Amomum*.

All Persons that deliver any Receipts *Lemery*. concerning *Amomum*, mean the *Amomum Racemosum*, or cluster'd *Amomum*,

which the Description before is given of; but there are several other little Seeds call'd by that Name, as the *Amomum falsum*, seu *Pseudamomum*, or the Bastard-*Amomum*: It is a little black Fruit of the Nature of the Gooseberry or the Juniper Berry, which grows upon a Gooseberry Bush, call'd *Grossularia non spinosa, fructu nigro*, or the Gooseberry without Pickles, with black Fruit, or the black Gooseberry. 'Tis of little or no Use in Physick, any more than the *Amomum* of *Pliny*.

The small Spice which the *Dutch* and *Portuguese* call *Amomum*, and the *French Pepper* of *Thevet*, is round, and as big, or bigger, than Pepper; of a reddish Colour, appearing at one End like a small Crown, of a Taste and Smell like a Clove, a little pungent and aromatick; it has likewise the Virtue of the Clove, but is scarcer. Some call it the small round Clove, as is describ'd by *Bauhin*, p. 194, with the Name of *Amomum quorundam odore Caryophylli*.

[This is the *Amomum Racemosum*, C. B. Pin. 413. *Amomum novum Cardamomi vulgaris facie, sive Indicus racemus*. J. B. 2. 195. It is brought to us from the *East-Indies*.

The Descriptions of Simples among the old Authors, particularly the *Arabians*, are so short and imperfect, that notwithstanding the Perfection that the Knowledge of Botany is now arriv'd at, it is not known what was the true *Amomum* of the Antients, almost every Author having had a different Opinion about it. However, if this be not the very *Amomum* of the Antients, it at least comes the nearest it of all others, and ought to be used wherever *Amomum* is prescribed.]

28. Of the Great Cardamome.

THE great *Cardamome*, which the *French* call *Maniguette*, or Grains *Pomet*. of *Paradise*, is a triangular Seed of a reddish Colour without, and white within, of an acrid picquant Taste, like that of Pepper; which is the Reason that the Hawkers frequently sell it for Pepper.

The Plant which bears this Seed, has green Leaves, among which comes a Fruit, or rather a Husk, of the Size and Figure of a Fig, of a fine red Colour, in which are enclos'd these Grains of *Paradise*: It is call'd *Maniguette*, or *Melaguette*, from a City of *Africk*, call'd *Melega*, from whence they used to bring it into *France*; but at present it is brought from several Countries, by the Way of *St. Malo*, and other Places.

It ought to be chosen of a high Colour, fresh, well fed, and of an acrid piercing Taste.

[The

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The Grain of Paradise.

29



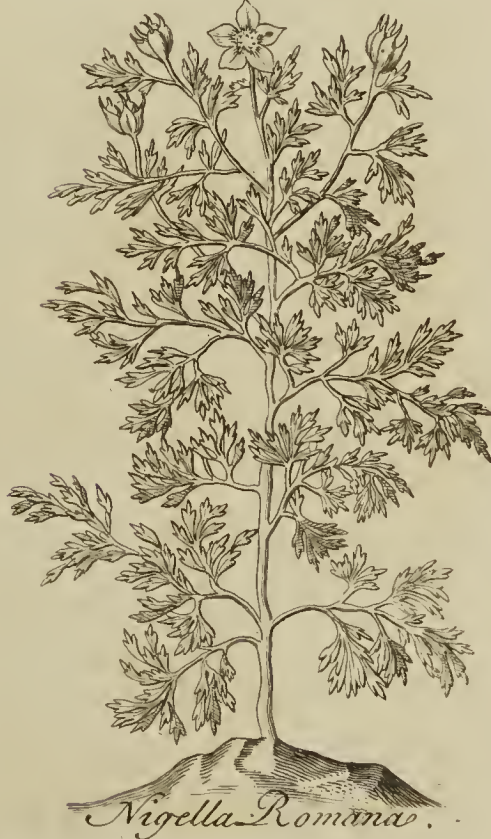
The true great Cardamom.

29

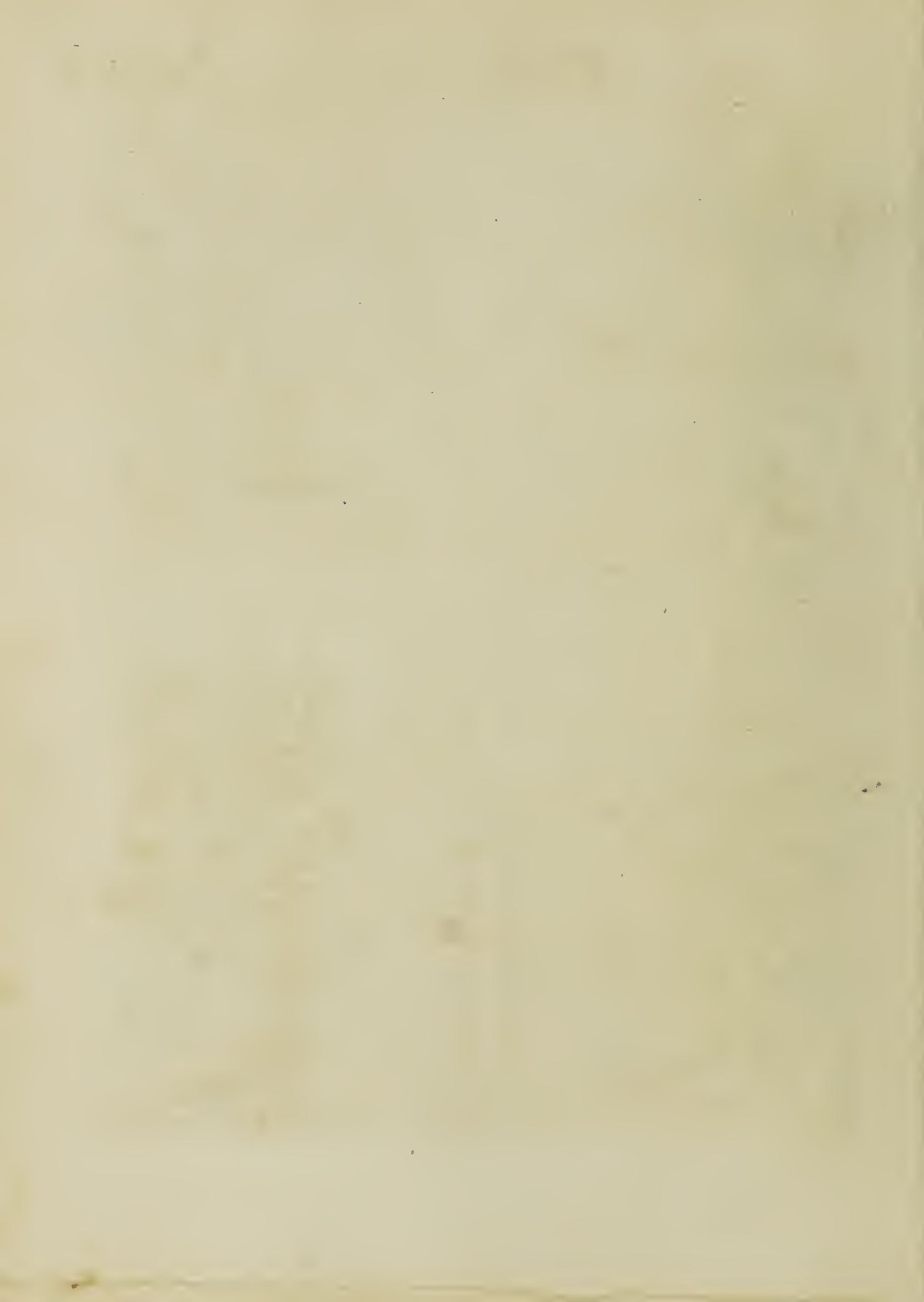


The Lesser Cardamom.

30



Nigella Romana.



[The *Grana Paradisi* are the *Cardamomum Arabum majus*. Ger. 1358. *Cardamomi genus maximum, Grana Paradisi seu Melleguetta*, &c. J. B. 2. 204. They are brought to us from Guinea, and are of a Taste between *Cardamom-Seed*s and Pepper. They ought to be distinguish'd from the true *Cardamomum majus*, and it is a great Error to use them in the Place of it. The true *Cardamomum majus*, is the *Cardamomum cum siliquis longis*. J. B. 2. 205. *Cardamomum majus Officinarum*. C. B. P. 413. This is brought us from Java, but is very seldom seen in the Shops. The Husks are sometimes as long as ones Finger, and full of an angular brown aromattick Seed; and this is what is described by *Pomet* in the Beginning of the following Chapter.]

29. Of the true Great Cardamome, and the Small Cardamome.

THE true great *Cardamome* is a reddish, sharp, angular Seed, enclosed in a Pod of the Length of a Child's Finger, made triangular; it grows upon a Plant, which some have assur'd me is very luxuriant. and whose Leaves are like those of the Trefoil, ending in a Point, and much indented; it grows in several Parts of India: These Pods are very rarely brought into France, and are of very little Use, because the little or smallest *Cardamome* is more enquired for, as well by Foreigners as ourselves, as having much more Virtue in it than the true great Sort. However, as it is sometimes met with, I shall observe that it ought to be chose new, and such as comes nearest the Taste, &c. of the smaller *Cardamome*.

The small *Cardamome*, which is what is most common among us, and brought from Holland, is a little Husk or Pod of a triangular Figure, on the Outside of a light grey, strip'd and adorn'd with a small Tail of the same Colour. When open'd, you'll find a Quantity of small Seed in it of the Figure and Taste of the *Amomum*, of which I have been speaking of before.

The Plant which bears the small *Cardamome* is as yet unknown to me, notwithstanding the diligent Enquiries I have made; but in all Appearance, it is like the true great Sort, and has no other Difference, but what the Diversity of Places where it grows gives it. It is brought to us by the Dutch and English, from the Kingdom of Visapour, where it is very scarce, and only used at the Tables of the Great, being the best Spice of that Country. Chuse the freshest, well fed, weighty and least fill'd with empty Husks and little Straws, well dried and sound: It is best not to

open the Husks 'till the Time of using the Seed, because it keeps much best in them: When they are to be used, separate them from the Husks, and chuse the most compact, best fed, highest colour'd, and most aromattick: This we chiefly use in Medicine, but the Dutch use it much for chewing.

His Description of the great and lesser *Cardamome* differs nothing from *Pomet*: Lemery. But the third or least Sort is call'd simply *Cardamome* for its Excellence, because it is better and most used of any of the three. It is brought to us in little triangular Husks or Pods, of an Ash Colour, tending to white; they stick or adhere together by little Fibres, but are easily divided from their curious Coverings; the Seed is then of a purplish Colour, and of an acrid, biting, aromattick Taste. All the *Cardamomes* contain in them a great deal of volatile Salt, and essential Oil.

They are proper, particularly the least, to attenuate and refine the gross Humours, to expel Wind, fortify the Head and Stomach, assist Digestion, excite Seed, provoke Urine and the Terms, resist malignant Vapours, and to chew in the Mouth to procure Spittle. It is call'd *Cardamome*, or sweet *Nasturtium*, because it has a Smell much like the *Nasturtium*, or Cresse, from whence it is deriv'd.

They are used from half a Dram to a Dram in Powder, or you may make a Decoction of them in Wine or Water. *Cardamome-Water* is made of them, being sweeten'd with double refin'd Sugar; 'tis a very good Stomachick Water, helps Digestion, and is an Antidote against the Plague, or any malignant Disease. A Tincture drawn from it in Tincture of Salt of Tartar, is excellent against the Stone, Strangury or Stoppage of Urine. Dose from two Drams to half an Ounce.

[This is the *Cardamomum simpliciter in Officinis dictum*. C. B. Pin. 414. *Cardamomum cum siliquis seu thecis brevibus*. J. B. 2. 205. It is brought to us chiefly from Malabar. The Plant which produces the true great *Cardamome* is common in the Woods of Java; it grows to the Height of seven Feet; the Stalk is strong, and envelop'd by the Leaves, as the Stalks of some culmeferous Plants, but not jointed like them: The Flowers grow on the Tops of the Stalk and Branches, and are like the Flowers of our Hyacinths, white, with a purple Border round the Edge. The Leaves bruised yield a pleasant Smell, and are hoary underneath.

That which bears the lesser *Cardamome* has a Stalk jointed like the Reed, and beset with Leaves not unlike those of the same Plant. It is two,

two, or at the utmost three Feet high ; the Flowers are of a whitish yellow, and four-leav'd ; after which come the Pods, which are the *Cardamum minus* of the Shops. These Flowers and Pods do not grow, as in the larger Kind, on the Tops of the Branches, but upon particular separate Stalks, that arise from the Root without Leaves, and that perish as soon as the Seed is ripe.]

30. Of the *Nigella Romana*.

THE *Nigella Romana* Seed is the *Pomet*. Seed of a Plant about two Feet high, having little green Leaves indent-ed and snipp'd deep, among which come white blueish Flowers, and then Husks or Pods, in which are contain'd a longish Seed of a grey Colour, piquant Taste, a strong and aromatick Smell.

Chuse the newest, plumpest Seed, of a fine bright yellow, of the most aromatick Smell as well as Taste, that you can possibly meet with : That which comes from *Italy* is the best, and more esteem'd than that which grows among our Corn. The Use of this Seed is to kill Worms, correct Wind ; and some Persons affirm it to be a very good Antidote ; they reckon it likewise very useful to create Milk in Nurfes.

[This is the Seed of the *Gith Officin. nigella Flore minore simplici candido*. C. B. Pin. 145. *Melanthium Calyce et Flore minore Semine nigro*. J. B. 3. 208. It is a Plant of a Foot high ; the Leaves are finely divided, the Flower and Seed Vessel both large for the Size of the Plant, and the Seed Vessel is divided into five Cells. It is very little used in Physick.]

There are several other Sorts of Seed, which I shall forbear to mention, because we seldom meet with them, as the *Mense*, *Messe*, or *Mungo*, which the *Indians* use the Plant of to feed their Horses with, and the Seed in Physick to cure Fevers, as we may see in the *Indian History of Garcias ab Herto*. There is another Sort, the *Bisnague*, as yet very scarce, which the *Turks* use, as several Persons of Quality in *France* do, to clean their Teeth. Another Kind there is, call'd *China Anise*, or *Badian*, which serves the Eastern People, in Imitation of the *Chinese*, to prepare their *Tea* and their *Sorbec*.

This Seed is entirely like that of the *Coloquintida*, except that it is of a dun Colour, as that it shines and is of an agreeable Smell : It is contain'd in small Pods, thick and hard. 'Tis with this Seed, and the Root *Nisi*, that the *Chinese* make their Drink of *Tea* and *Sorbec* more agreeable than in *France* : The Quantity is two Drams of *Nisi*, four Ounces of boiling Water, half an Ounce of *Tea*, and a Dram of *China Aniseed*.

There are a great many other Seeds worth the Druggist's Knowledge, as well as others ; but they being so common, it would be counted superfluous to name them, as Lettuce, Violet, Succory, Poppy, Mallows, Turnep, Radish, Holy-oak, Fleawort, &c.

There are other Seeds commonly in Use, and as commonly known, as the four cold Seeds, *Citruls*, or Water-Melons, Gourd, Melons, and Cucumber, which are chiefly used for Emulsions, and sometimes to express a cooling Oil from them for the Skin, and other Things of the like Nature, that tend to the Ornament of the Complexion, &c. The Method of making all Sorts of Oil by Expression, is so universally known, it would be lost Labour to expatiate upon it, there being no more in it than blanching the Seed, beating it in a Mortar, and pressing the Oil from it cold : After the same Way is made the Oil of Ben, White Pine, Poppy, sweet or bitter Almonds, Pistacia Nuts, &c.

Authors have also given the Name of a Seed to a Sort of Plant which has neither Leaves or Root, which is what we call *Dodder of Thyme*, whose Description you will find in the Chapter of *Epithymum*.

31. Of the Sago of the Indies.

SAGON, or Sago, is a round Seed, whitish, but a little tending to grey ; it is unequal in Shape and Size, and is not bigger than the Head of a large Pin.

This Seed is but little known in *France* ; its Taste is Stiptick, tending to insipid, and not unlike *Piedmont Rice*, or cleans'd Millet. The *Indians* boil it 'till it is converted to a Jelly, with which they nourish themselves for a Time, and believe it has the Virtue to re-establish their Health and prolong their Days.

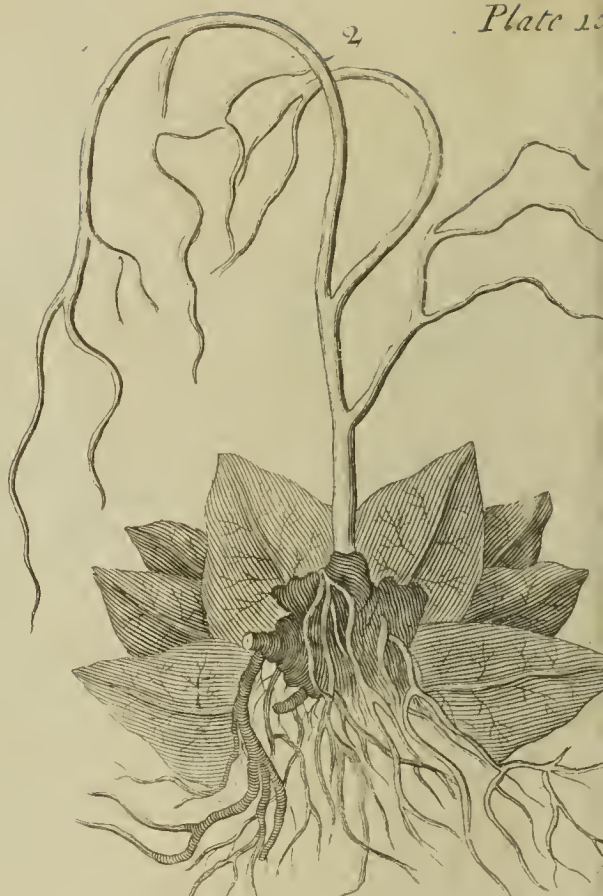
It has been long in Dispute what Part of the Tree or Plant which produc'd it, the *Sago* really was, and many others as well as *Pomet* have taken it for a Seed ; but later Discoveries have made it certain, that it is prepar'd from the *Fæcula* of the Pith of a Species of *Indian Palm*. The *Palma Indica candice in annulos protubantes distincto, fructu pruniformi*. R. Hist. 2. 1630. *Zagu, seu Arber farinifera*. Jonsl. Dendr. 144. It is prepar'd by taking out the Pith, and beating it in large Mortars ; and afterwards mixing Water with it, and straining the Liquor, the *Fæculæ* of which they form into Cakes for their own Use, eating them as Bread when their Rice is scarce ; and Part of it they granulate and dry, to send into *Europe*.

The End of the first Book of SEEDS.

B O O K



Ipecacuanha.



Contrayerva.



*Dorystenia Dentaria radice Sphondylii folio
placenta ovali.*



*Dorystenia dentaria radice folio minus lacin
Placenta Quadrangulati et undulatas.*

*The two kinds of
Contrayerva*

BOOK the Second.

Of ROOTS.

P R E F A C E.

I Understand, by the Root, that Part of a Plant which is in the Earth, and which draws in the Nutrition, and communicates it to other Parts produc'd from thence, as the Stalk, the Leaves, the Seed, &c. The Roots which we commonly sell, are not only many in Number, but very different in Figure and Virtue. Our Herbarists supply us with many, which require no other Preparation than to be cleans'd and dry'd, which is sometimes well, and sometimes ill done, according to the Capacities of the Herb-Dealers; such as Enula Campana Roots, Marsh-mallows, Avens, and the like. We have others brought from foreign Countries, from some of which the Heart, or inner hard Substance, is taken out, because it is stringy, hard, and useless, as Turbith, Bastard Turbith, White Dictamny, &c. as is practis'd here upon several Roots, as Cinquefoil, &c. We have others brought to us cut into Slices, as Jalap, Mechoacan; in little Bits, as the Lesser Galingal; in larger Pieces, as Rhubarb and Rhaponic; in the entire Root, as Angelica; some adorn'd with their Leaves, as the Virginia Snake-Root; others are brought in long, stringy Fibres, as Sarsaparilla; and last of all, some are wash'd and cleans'd from their outward Skins, as Florentine Orris, and the like.

There is no less Difficulty in the Knowledge of Roots than of Seeds, as well by reason of their different Kinds, as the several Marks which many of them have in common. 'Tis for this Reason we ought to be very circumspect in our Choice, and know the main Distinctions of every one, to make an exact Judgment of them, which is difficult to be done without Practice, and where a Man does not make it his continual Business. Those who want Roots, ought not to go about hunting for the best Bargains, but apply themselves to Merchants in whose Probity they can put their Confidence, especially when the Price is any thing considerable.

Those Persons who value not their Conscience, make no Scruple at all to sell one Thing for another, and ask as much for an Ounce of the Root they deceive you with, as they would sell a Pound of it for under its own Name; as some People sell Tormentil for Contrayerva. It is not to a Person's Advantage to load himself with a great Quantity of these Goods, especially such as there is not a large Demand for, as well because of the Waste in keeping them, as because many are subject to be Worm-eaten, as Angelica, the Acorus Verus, &c. and to spoil, as Rhubarb, and the like.

1. Of Ipecacuanha, or Ipecacuana.

THE Ipecacuana, call'd Begu-quella, likewise Specacuanha Cagofango, Beculo, Beloculo, or the Golden Mine Root, is a little Root about the

Thickness of the Barrel of a middling Quill, which the Dutch and Portuguese bring us from many Parts of America, and which is found nowhere but where there are Gold Mines, which has been the Occasion of one of its Names. This is gather'd by those that are condemn'd to the

E

Mines;

Mines ; and that which makes it the scarcer, is, that the most industrious Labourer cannot get above a Dozen Pound of it in a Year ; and if it were not that it is exchange'd for other Merchandizes, it would be much dearer than it is. The *Dutch* and others bring us three Sorts of *Ipecacuana*, to wit, the brown, which is the first and best Sort, and consequently the dearest ; the second, which is grey, inclining a little to red, and white within, is less strong than the brown ; the third is the white, of which I shall speak afterwards.

These Plants call'd *Ipecacuana*, as well the brown as the grey, are of a small Height, partly creeping, partly rising about half a Foot high ; the Leaves of them are like those of the *Pellitory* of the *Wall*, in the Middle of them grow white Flowers of five Leaves apiece, supported by little Heads with a Sort of brown Berries, which when they are ripe, are of a reddish brown Colour, and of the Size of a wild Cherry : These Berries contain a white Pulp full of Juice, in which are enclosed two Seeds, hard and yellowish, approaching to the Figure of a *Lentile*.

This Root ought to be chose fresh, new and well sed, wrinkled, hard to be broke, resinous in its Substance, and having a Nerve in the Middle ; take care that it be not mix'd with the Stalk, Filaments, or Threads, which those that sell it oftentimes throw amongst it ; and that it be of an acrid, bitter and disagreeable Taste. Some Friends that I have at *Lisbon*, in *Holland*, and at *Marseilles*, have assured me, that the best *Ipecacuana* is the brown, which is chiefly that which comes from the Gold Mines, and that the other two Sorts are brought from the lowerniost Parts of the Mountains thereabouts and other moist Places.

The Use of the said Root, is for the Cure of *Dysenteries* ; several People will have it that this Root is alexiterial ; but notwithstanding that, I would not advise any Body to make use of it, but with great Precautions, and by the Advice of understanding People, because it works with Violence, whether given in Infusion or Substance. The common Dose is from half a Dram to a Dram in Powder, taken in any proper Liquid in the Morning fasting, and giving proper Liquids two Hours afterwards.

This Root vomits before it acts as an Astringent, which is different from the Operation of other Astringents.

Of the White *Ipecacuana*.

The *White Ipecacuana* differs from the other two, in that the Root is white, and altogether made like the white *Behen*, or the white *Dic-*

tamny Root, and the Leaves resemble those of the round Garden-Sorrel. The *Spaniards* and *Portuguese* prefer this *White Ipecacuana* before the two foregoing Sorts, especially for their Women with Child, and little Infants, by reason it works with less Violence, and is commonly given in Substance from half a Dram to a Dram, and in Infusion to two Drams.

In the Month of *January* 1690, there was a Thesis in the Physick Schools of *Paris*, concerning the *Brasil Root*, or *Ipecacuana* ; in which it was observ'd, that the *Americans* had it in very great Esteem, as well because they believ'd it was a very powerful Antidote, as because it was very useful for the Cure of many tedious and troublesome Diseases ; but, above all, for the Cure of *Dysenteries*, and other Fluxes of the Lower Belly.

Some will have it, that M. *Helvetius*, a *Dutch* Physician, brought the *Ipecacuana* into Use among the *French* ; but I can assure you to the contrary, because above twenty Years before that I saw it at *Paris* ; for a Proof of which I remember there was a Quantity in the Shop of M. *Claquenelle*, Apothecary, which fell into the Hands of M. *Poulain*, his Son-in-Law, who was likewise an Apothecary, and he afterwards introduc'd it again into Practice, by the Direction of *Helvetius*.

The *Ipecacuanha*, or *Specacuanha*, is a small Root, of the Thickness of a *Lemery*. Quill of a moderate Size, which is brought to us dry from several Parts of *America*. There are three Species or Sorts of it, the brown, the grey, and the white. The brown is the strongest and most valued of all ; it is the compactest, crooked, wrinkled in Curls, stringy in the middle, difficult to break, of a smart Taste, and bitter : It grows in *Brasil*, &c. as said before by *Pomet*.

The Root of the grey *Ipecacuanha* differs from the former both in Colour and Virtue, for it has less Efficacy. This is brought from *Peru*, by the way of *Cadiz*, and the *Spaniards* call it *Bexugillo*.

The third or white Sort is different from the two others, not only in Colour, but in Figure ; for it is neither crooked nor uneven. Some Authors say it is small as *Penny-royal*, and that the Leaf is soft and woolly, and that the Flower is white : Others will have the Leaf like round *Sorrel*. It grows low, and in moist Places. The way to chuse any of the three Kinds, is to take the largest and best grown.

This Root is both purgative and astringent ; it works upwards and downwards, according as the Humours are more or less soluble ; strengthens and corroborates the Fibres of the *Viscera*, by means of its earthy Parts. It is one of the best Reme-

Remedies, and most certain, for the Cure of the *Dysentery* or Bloody-Flux : It stops likewise other Scourings of the Guts, but not with that equal Success. The Dose beaten into fine Powder, is from 20 to 30 Grains of the brown, from 30 to 40 Grains of the grey, and so to a Dram of the white Root. The first who brought this into Use in *France*, was Monsieur *Le Gras*, a Physician, (who had made three Voyages to *America*) in the Year 1672. It was shewn afterwards by the Abbot *Bourdelot* ; and, in one of my Courses of Chymistry, I had some given me by a *Druggist*, but without any Knowledge or Instruction into its Qualities at that Time.

[It is the Root of the *Herba Paris Brasiliana polycoccus*. R. Hist. i. 669. *Periclymeno Accedens Planta Brasiliana flosculis congestis albis*. H. Ox. 3. 535. It is but very lately that it has been known in Physick among us. M. *Le Gras*, in 1672, first brought it into *France*, and Mr. *Cleaquenelle* gave it but with very ill Success, which was owing to his giving it in too large a Dose. The elder *Héluetius* afterwards used it successfully, of whom the *French King* purchased the Secret, and all that related to the Use of it, and communicated it to the World. It is the best Vomit ever known in Medicine, never fatigues the Stomach, and is beside the best Medicine known in *Dysenteries*, in which if the first and second Dose do not produce the expected good Effects, it ought to be continued every Day in Doses of three or four Grains each, to act as an Alterative. When given as a Vomit the general Dose is half a Dram, and it operates so well in Substance, being only powder'd, that all Preparations of it are needless.

The *Pseudo Ipecacuanna* is the Root of a Species of *Apocynum*.] See Page 155.

2. Of the *Contrayerva* Root.

THE *Contrayerva* is the Root of a Plant which has green creeping Leaves, full of small Fibres, of the Figure of a Heart, in the middle of which arises a Stalk wholly naked, about a Finger's Thickness. It is brought to us from *New Spain*.

Chuse such Roots as are fresh, well fed, adorn'd with long Filaments, or fibrous Strings, that are knotty and ponderous, of a yellowish red on the Outside, and of an Ash-colour'd white within, and a sweet aromack Taste.

It is an *Alexipharmack*, very powerful for resisting several sorts of Poisons ; and is therefore call'd by the *Spaniards* *Contrayerva*, which signifies in their Language a Counter-Poison.

There grows also in *Peru* a Root very like it, which is call'd *Radix Drakena*, from Sir *Francis Drake*, who brought it first into *England*. Notwithstanding that the Roots of the *Contrayerva* are an Antidote, the Leaves are a mortal Poison.

It is a good *Sudorifick* taken in Powder from four Grains to fifteen, in any proper Liquor, and this Dose may be repeated three or four Times if it be found necessary. It is good in Pains of the Head, and in Rheumatisms and the Sciatica.

Several People make Use of this Root reduced to Powder, and mix'd with double the Quantity of *Jesuits Powder*, or the Bark, to turn off the Fits of an Ague or intermitting Fever ; and others again, mix the same with *Ipecacuanna*, to cure a Loosness or Bloody-Flux.

We sell also the Root of a Plant which grows plentifully throughout all *France*, for white *Contrayerva* : It likewise grows in every Garden, and is known every where by the Name of *Asclepias* or *Hirundinaria*. This is very white, and is called, by every Body in *France*, *White Contrayerva*, because it is pretended this has the same Virtues. There is a Composition of several Drugs in Mr. *Charas's* and other Dispensatories which is call'd the *Contrayerva Stone*, by Reason this Root is the Basis of the whole. It ought to be chosen new, well grown, and of a piercing aromack Taste.

Bauhin makes the *Contrayerva* a Species of *Cyperus*, and calls it *Long Cyperus* with the sweet Root. You ought to chuse that which is found, new, aromack, and sharp in Taste. It is an excellent *Alexipharmack*, resists Poison, and cures the biting of Vipers, other Serpents, or any venomous Beast ; and is good against Calentures, Measles, Smallpox, Spotted Fever, Plague, or any malignant and pestilential Disease. *Schroder* says it is good in the Plague, even when the Tokens appear : It resists Melancholy, cheers the Spirits, and makes the Heart merry. It may be given either in Powder, from half a Dram to a Dram, or in any cordial Draught or Bole.

[The Name of *Contrayerva* has been at different Times given to many different Roots, supposed to have the Virtues of resisting Poisons. But what we have now in *England* under that Name are the Roots of the two Species of the *Dorstenia* of *Plumier* ; which have both the same Shape and Virtues, and are gather'd and sent over indifferently to us.

The one is the *Dorstenia Dentariæ radice Sphondylii folio placenta Ovali*. Act Phil. Lond. No. 241. And the other the *Dorstenia Dentariâ Radice, folio minus laciniato, placenta quadrangulâ, et undulata*. Ibid.

Doctor *Houſon* gather'd the firſt in *New Spain*, near *Old Vera Cruz*; and the other on the high Rocky Grounds about *Campechy*.

The Roots are in great Eſteem in Fevers of all Kinds that can be reliev'd by encreaſing the Diſcharges through the cutaneous Pores, and for throwing out the Small Pox.]

3. Of Virginia Snake-Root.

Pomet. **T**HIS Snake-Root, which is called by ſome *Dittany*, by others, *Contrayerva* of *Virginia*, &c. is a Plant which grows there, and in ſeveral other Parts of the *Northern America*, and which is uſed ſucceſſfully by the *Engliſh* againſt all ſorts of Poisons, and the biting of venomous Creatures; and is alſo very proper againſt all epidemical Diſeaſes. *Monſieur D'Aquin*, firſt Phyſician, made choice of this Root, as one of the principal Ingredients in the new Reformation of *Venice-Treacle*, ſet down in *Monſieur Charas's* Royal Galenical and Chymical *Pharmacopœia*. As to the Goodneſs of this, you ought to chuſe ſuch as is freſh and new, thick and well ſed, of a ſtrong Smell, very much like *Spike* or *Lavender*.

There are ſeveral kinds of this Root, *Lemery*. as the greateſt, the leſs, and the leaſt, together with *Parkinſon's Polyrrhizos Virginiana*: The leaſt only is that which is ſold in our Shops, which is a ſmall fibrous or ſtringy Root, of a kind of Aſh-Colour, with a ſpicy or aromatical Smell, and a ſtrong, hot, bitter Taſte, and is brought to us from *Virginia*, *Maryland*, *New Jerſey*, *Penſylvania*, and *Carolina*; but that which comes from *Carolina*, *St. Auguſtine*, and other the moſt ſouthern Places of the *Floridan* Continent, is much the better, in aſmuch as thoſe Climes are hotter: That which is clear in Colour, clean and freeſt from Duſt and Sand, and very ſtrong in the Scent, is the beſt. It is one of the greateſt *Alexitericks* in the World: It is known to cure the Biting of the Rattle-Snake upon the Spot, which, without this Remedy, is, for the moſt Part, preſent Death. The Power, Malignity, and Volatility of the Poiſon, is not ſo ſwift and great, but the Subtilty, piercing Qualities, and *Alexipharmack* Virtues of this Medicine yet exceeds it, diſappointing all the ill Effects of the viperine Poiſon, if given in due Time. And, without doubt, if it will cure the Biting of the Rattle-Snake, the moſt malignant and dangerous of all Serpents, it will cure the Bitings of all other Serpents, as well as other poiſonous and venomous Beaſts whatſoever, and alſo the Biting of mad Dogs, and Wounds made with poiſon'd Arrows; for which Things it

is to be eſteem'd as one of the moſt valuable Drugs yet diſcover'd.

It is a known, and often approv'd Remedy againſt the Malignity of the *Measles*, *Small-Pox*, *Spotted-Fever*, and the very *Plague* itſelf; as alſo againſt all manner of *Burning* and *Pestilential Fevers*, not only preventing the Infection before it has ſpread itſelf, but curing the Diſeaſe after the Infection has ſeiz'd; for which Purpoſe, there is no Vegetable, or any other Remedy that I know of, equal to it, in the whole Courſe of Medicine. The Experience of this Part of the World may juſtly recommend the Virtues of this Simple every where, as good againſt Faintings, Swoonings, Sickneſs, and all Diſaſſections from the Heart. It is uſed in a Decoction by the *Indians*. We commonly give it in Powder from ſix Grains to a Scruple; or in an Infuſion in Wine, Brandy, or Water, from a ſpoonful to four, &c.

[This is the Root of a Species of *Birthwort*. The *Aristolochia polyrrhizos auriculatis foliis Virginiana*. Hiſt. Ox. 3. 510. Tourn. Inſt. 162. This Plant produces the Root we firſt receiv'd; and therefore is eſteem'd the true and genuine Snake Root: But beſide it there are the Roots of two other Species of the *Aristolochia* ſent over and uſed in common with it, viz. thoſe of the *Aristolochia violæ fruticoræ foliis Virginiana cujus radix ſerpentaria dicitur*. Raii Hiſt. 3. 394. And of the *Aristolochia piſtolochia ſeu Serpentaria Virginiana caule roloſo*. R. Hiſt. 3. 394. both which are of much the ſame Shape and Virtues. Theſe Plants have Semihſtular Flowers.]

4. Of the ſeveral Sorts of Rhubarb.

THE Rhubarb of the *Levant* is the Root of a Plant, of which I know *Pomet*. not poſitively the true Place where it grows, any more than its Figure. For this Reaſon I was oblig'd to take the Impreſſion which is repreſented by *Dodonæus*, it not being poſſible otherwiſe to get the Figure of the Leaves, and the Manner how they are diſpoſed. For the Flowers, I have had a good Quantity of them preſented to me by a Friend.

Dalechamp, in the 558th Page of his Second Volume of the *History of Plants*, makes a large Diſcourſe of the *Rhubarb*, and of the Place from whence it is brought to us; but he, and other Authors that write about it, ſpeak ſo variously, there is nothing to be depended on; ſo that I ſhall only give you an Account of what was writ to me from *Marſeilles* the 25th of *July* 1692. “The *Rhubarb* comes from *Persia*, ſome ſay it “grows there; but others will have it that it “comes



The true Rhubarb



Mountain

Rubarb.



Jalap.



Mechoucan.

“ comes from the Confines of *Muscovy*; the
 “ most common Opinion however is, that it
 “ grows in *Persia*. Mr. *Tavernier*, assures us,
 “ in his Book of Travels, that the best *Rhubarb*
 “ grows in, and is brought from the Kingdom of
 “ *Boutan*.

This Root, newly drawn from the Earth, is thick, fibrous, blackish on the Outside, and of a reddish Colour marbled within: It bears large Leaves, from whence arise little Flowers, resembling Stars; after which follow the Seed. Chuse your *Rhubarb* new, and that which is in small, even Pieces, pretty firm and ponderous, of an astringent Taste, and bitter, the Smell not disgustful, but rather aromack, and of a yellow Colour, bright on the Outside, and of the Colour of a *Nutmeg* within, and such as, when infused in Water, will produce a Tincture like that of *Saffron*, and, when bruised in a Mortar, the Colour within is of a lively reddish Cast; but the principal Caution is that you do not buy old *Rhubarb*, made to look well with Powders, which we need not mention, which may be easily found out in the handling of it, as the yellow Powder will stick to your Fingers.

Great Virtues are assign'd to *Rhubarb*, especially for strengthening the Stomach, and purging the Gall gently, principally if assisted with any other Purgative. It is esteem'd likewise very serviceable for stopping of Bloody-Fluxes, and other Loosenesses, either chew'd in the Mouth, or grossly bruised, and infused in any proper Vehicle: It is also given to Children to destroy Worms; and, in short, is an admirable kindly and salubrious Medicine, as well in Age as Youth, and the full Vigour of Years; in all which Difference of Age or Circumstance, duly proportion'd and apply'd, it works friendly to Nature, and efficacious to the Disease.

Of the American Rhubarb.

Within these few Years we have had several Plants of *Rhubarb* introduced into our Gardens, which Monsieur *de Toisy*, Vice-Roy of the Islands, brought from the *West-Indies* into *France*.

There are some Places where this *Rhubarb* grows so large, and comes so near the true *Persian Rhubarb*, that it is very difficult to distinguish it. I can also affirm, that I have myself pull'd up out of the Earth, near the Bridge at *Lyons*, on the River-Side, several Roots of this *Rhubarb*; which being scrap'd and dry'd, scarce differ'd at all from the true *Rhubarb*.

Several Persons take this *Rhubarb* for the *Rhapontic*, because of their great Likeness, and among others *Prosper Alpinus*, who brought it

from the *Indies* to *Padua*. The great Difference between *Rhubarb* and *Rhapontic* is, that the *Rhubarb* is generally in roundish Pieces, and has its internal Lines crossways; and on the contrary the *Rhapontic* is in long Pieces, and has its Lines reddish, and running lengthways; and as this Difference is known but to few People, those who find us the *Rhubarb*, frequently put *Rhapontic* among it, which is the Cause that the true *Rhapontic*, that is that of the *Levant*, is so scarce; and whoever wants *Rhapontic*, must look for it among *Rhubarb*, for we receive no *Rhubarb* without more or less of this among it; but beside the Marks before given to know the *Rhapontic* from the *Rhubarb* by, the surest of all, is to taste them; for the true *Rhubarb* gives no Viscosity in the Mouth, and the *Rhapontic* does.

Monks Rhubarb, or that of the Mountains.

The Scarcity of the *Levant Rhapontic* has given Occasion to some ill People to sell the Roots of the round-leav'd *Hippolapathum*, a Plant frequently cultivated in Gardens, or of another *Hippolapathum*, with large but not round Leaves, found on some Mountains, in the Place of it, to People who do not understand the Difference; tho' the Distinction is easy; for the *Levant Rhapontic* is yellow without, and reddish and marbled within, whereas this *Hippolapathum* is black and rough without, and yellow without any marbling within.

Rhabarbarum, *Rheum*, in English *Rhubarb*, is a thick fungous Root, *Lemery*. which is brought to us dry'd from *Persia* and *China*, where it grows, and sometimes from *Turkey*, which last is thought by the English Merchants to be the best of all, being a sort of middle-siz'd Pieces, smooth, fresh colour'd, and of a mix'd yellow Oaker Colour, of a lively strong Smell, firm in cutting, but not very hard, or crusty; being chew'd, 'tis of a bitterish sub-astringent Taste, giving the Spittle a fresh yellowish Colour, and a good Flavour, not very heavy, nor yet spongy, or hollow, or rotten within. The next Sort of *Rhubarb* is that which is supposed to be brought from *Tartary*, *Muscovy*, and *Russia*, which is generally large and heavy, and more crusty, though many times very fresh and well scented, but nothing near so good as that brought from the *Levant*.

There are several Kinds of *Rhubarb*, as the *True*, the *Pontick*, and the *Bastard*: The *True* is that we have already describ'd by the Name of *Rhabarbarum*; the Word *Rha* some will have to come from the Name of a River in *Pontus* now call'd *Volga*; others from the *Arabian Word* *Raiwand*;

Raiwand; others say it came from *Barbarum*, a City of *India*, above the River *Indus*, and that *Rhu Inlicum* and *Barbaricum* were all one. It is brought from *China* to *Turkey*, and so to *Venice* by Land; this lasts longer than what our Merchants bring by Sea, which corrupts sooner. It is a most admirable Purge, expelling sharp, griping, clammy, and tartarous Humours from the Stomach and Bowels, it cures the griping of the Guts, Cholick and sharp Fluxes to a Miracle, so that it may be allow'd to be one of the best Specificks in the World: It cures all sorts of Fluxes whatever by carrying off the Cause, and therefore is good against the Bloody-Flux, Dropsy, Jaundice, green Sickness, Rickets, Melancholy, and other the like Diseases. It is given in Powder from a Scruple or two to a Dram, and a Dram and half, or in an Infusion from a Dram to two Drams, corrected with Cinnamon, and other Aromaticks; it may be quicken'd with *Scammony*, *Jalap*, &c. *Schroder* makes an *Extract* of it with Endive, Succory or Agrimony Water, acuated with some Drops of Oil of *Tartar per Deliquium*. Dose of this from a Scruple to a Dram. Likewise you have a Syrup of Succory with *Rhubarb*; *Schroder* says, *Rhubarb* is the most used of all Purges, and without Danger in all Ages, it may be safely given to Children, and Women with Child, and is best without Correctors, only two or three Drops of any of the essential Oils, as *Aniseed*, or the like.

Of Pontick Rhubarb.

Some Authors will have this to be the same with the former, saving only the Climate and Place of Growth, which may something change its Form and Goodness; others will have it to be the longer and slender Part of the *Indian*, because it is very like in Colour, Form and Virtue to the true *Rhubarb*; but not of so solid and firm a Substance as the true, which is bitter in Taste, and of an aromatick Smell, being astringent and corroborating after Purging. This comes from *Russia* and *Muscovy*; as also from the Straights out of *Pontus* and *Turkey*. It is of a fresh Colour, inclining to yellow and red, but that is the best which comes nearest to the true *Rhubarb*, which is the Mark of Distinction you ought to chuse it by. The Virtues and Preparations are the same as the former, only this will admit of near a double Dose to the other.

Of Bastard Rhubarb.

There are four several Kinds of this; 1st, *Hippelapathum rotundifolium*, or *Bastard Rhubarb*,

which is the great common round leaved Dock, whose Root is greater than the *Patience* or *Monks Rhubarb*, and without many Branches or Fibres thereat, yellow on the Outside, and somewhat a pale yellow within, with some discolour'd Veins therein, like to the true *Rhubarb*, but much less than it, especially when dry, it then quite losing its fresh Colour, which the true always holdeth. 2dly, *Rhabarbarum Monachorum*, *Patientia*, *Monks Rhubarb*, or *Patience*; this is the great Garden Dock, bearing the Name of *Rhubarb* for some purging Quality therein; this Root is long, large and yellow, like the wild Dock, but a little redder, and when dried, shews a lesser Stock of discolour'd Veins than the former.

3dly, *Rhabarbarum Americanum*, or *Rhamericum*, *West Indian Rhubarb*. This is called by them *Rhubarb*, being very like to the *East Indian* Kind, 'tis roundish, brownish on the Outside, and reddish within, which being broke, has some Whiteness mix'd with it; and being chew'd colours the Spittle yellow, like Saffron, and is bitterish withal. The *Bastard Rhubarb* has almost worn out the Use of the *Monks Rhubarb*, it is now grown so common and plentiful; and it is indeed much the better of the two, though their Natures and Properties are much the same; the *Bastard Rhubarb* works more effectually, a Decoction thereof, or Infusion in Vinegar, eases Pains in the Ear, gargling with it relieves the Tooth-ach, and the internal Use of it is good in the Jaundice, King's-Evil, to provoke Urine, expel Sand and Gravel, open Obstructions of the Spleen and Liver, and cure Fluxes of all sorts. Note, this *Rhubarb* is to be used in double the Quantity to the true *Indian*. 4thly, *Rhabarbarum Album*, or *Mechoacan*, of which I shall treat in its proper Place.

[The Plant which affords us the true *Rhubarb*, has been but lately known, and is the *Lapathum Bardanæ folio undulato Glabro, pro Rhabarbaro vero missum*. Rand. We have two Sorts of *Rhubarb* common in the Shops; the one *Oriental*, brought from *China*, which is heavy, and mark'd with yellow and reddish Veins, of a bitter astringent Taste, an agreeable Smell, and a bright yellow Colour, and which when wetted stains the Hands with a Saffron Colour: This is esteem'd the most excellent. The other is brought from *Muscovy*; it is heavy and of a dusky yellow, tho' of late that of *Muscovy* has been better cured, and much imported.

[*Rhubarb* was unknown to *Dioscorides* and *Galen*, and it is an Error to confound the *Rhæum* of those Authors with our *Rhubarb*; for it had a less purgative Virtue, and wanted the nice Characteristics

characteristics of *Rhubarb*, and was the *Rhapontic*, which is the Root of the *Rhaponticum Thracium*. Bocc. Mus. 127. *Rhaponticum folio Lapatii majoris glabro, Rha & Rheum Dioscoridis*. C. B. Pin. 116. This is frequent in the Gardens of the Curious, and flowers in *May*. The Root is a weaker Purge, but a more powerful Astringent than *Rhubarb*. Nothing has been more disputed among Botanists, than whether the *Rhapontic* of the Ancients and our *Rhubarb* are not the same: But it is very evident that this Plant is the true *Rhapontic* of *Dioscorides*, and that it is altogether different from our *Rhubarb*.]

5. Of Jalap.

Pomet. **J**ALAP is a grey resinous Root of a Plant of four or five Feet high, the

Leaves of which nearly resemble those of the *Ivy*, but that they are not so thick; the Seed is of the Bigness of a small Pea, of a blackish Colour and not unlike the *Myrtle Berry*, but that it is not so large: According to what the *Sieur Rousseau* has written to me, and what I have heard from *Father Plumier*, the *Jalap* we sell is the Root of this Plant, which is of late brought us from *New Spain*, and which *Mr. Tournefort* has nam'd *Solanum Maxicanum magno Flore, Semine rugoso, Jalap exstigmatum*, which signifies the *Nightshade* of *America*, with the large Flower and wrinkled Seed, which is believed to be the *Jalap*.

Father Plumier will have the said *Nightshade* to be a *Belle de Nuit*, because it entirely resembles our Species of *Belle de Nuit*, which we call in *Latin Mirabilis Peruviana*. This Plant is very common in our Gardens, and describ'd by *Mr. Evelyn* by the same Name, and because it only flowers in the Night it is call'd *Belle de Nuit*, or the Beauty of the Night..

We ought to chuse the *Jalap* in large Slices, such as will hardly be broke by one's Hands, but easily by a Hammer; of a blackish Grey without, and of a shining Black within, resinous, of an acrid Taste, and take Care that it is not mix'd with *Bryony* Roots or the like. It contains a great deal of Oil and Salt.

The *Jalap* sold in the Shops is brought from the *West-Indies*, but great Quantities of it come from the *Madeiras*, where it grows very common, without Culture. It is reckon'd an excellent Purger of ferous and watry Humours, but must be given with Caution, according to the Age and Strength of the Patient, because it works very vigorously, if given in Substance; the ordinary Dose is from a Scruple to a Dram; but that is too large a Quantity for *English* Constitutions; for if it be good it will operate sufficiently from half a Scruple

to two Scruples, which will answer in the strongest Constitutions.

The Resin or Magistery of *Jalap* is made with Spirit of Wine, and precipitated with Water: It is a liquid Resin, white and gluey, almost like Turpentine, which, after it is dried in the Shade, looks like common Resin. It has a Smell like *Scammony*, and, if rightly prepar'd, when thoroughly dry, is transparent, and so brittle that it will crumble betwixt the Fingers. This is more valuable than the *Jalap* itself, by reason it is much more efficacious, and can be easier administer'd. The Dose is about five or six Grains, either by itself taken in the Yolk of an Egg, or added in Bolus, Pills, or the like, to make other Physick work quicker and brisker. After the Resin, you may make an Extract, (by pouring on fresh Spirits of Wine) which will be of a brown Colour, and of the Consistence of Honey: This has the same Effect with the former, but in a less Degree.

Jalap, Jalapium, Gialapa, Gelapo, &c. is a grey Root, full of Resin, *Lemery*. which is brought from the *West-Indies*, cut into thin Slices and dried. The Plant which grows from it when in the Ground is, according to *Father Plumier* and *Monsieur Tournefort*, a species of the *Belle de Nuit*, which the latter calls *Jalap officinarum fructu rugoso*, the *Jalap* of the Shops with the wrinkled Fruit. The Stalk grows four or five Feet high; the Leaves are very like those of *Ivy*, but they are not so thick; the Flower is red as Scarlet, and sometimes changes to yellow and white, very agreeable to the Eye. This Flower blows in the Night, and closes again at the Approach of the Sun, and therefore is call'd *Belle de Nuit*, or the Night Beauty. It purges all Humours very well, but chiefly the watry, and therefore is useful in Dropsies, Gout, Rheumatisms, and for Obstructions. All the Names belonging to this Root are taken from the *Indians*. There are two Sorts of this *Jalap*, to wit, a whitish, and a blackish or dark brown, which being broke shines a little. This blackish Sort is much to be preferr'd, being more resinous, and heavier than the other; the whitish has little Resin in it, and therefore not so good, and still less so, if worm-eaten. It was unknown to the Ancients, it not being long since we had it from the *West-Indies*.

[*Jalap* is the Root of the *Convolvulus Americanus Jalapium dictus*. R. Hist. 1. 724. *Bryonia Mechoacana nigricans*. C. B. Pin. It was unknown in *Europe* 'till since the Discovery of *America*. It is one of the best Purgatives we now have. The Resin must be given in very small Doses, from five to twelve Grains at most; and even

even in such, if not well dissolv'd, it sticks to the Folds of the Intestines and raises great Heats and Disorders.]

6. Of Mechoacan.

Mechoacan, likewise call'd white Rhubarb, Scammony, or Briony of America, is a light Root, white both on the Outside and within, which is brought to us in Pieces from the Province of Mechoacan in New Spain, from which it takes its Name. There is likewise a great deal of Mechoacan, according to the Sieur Rousseau, in the Island of St. Domingo, insomuch that a Ship might be loaded with it from thence in a little Time. This Root, when in the Earth, sends forth Stalks that bear small Leaves like a Heart, of a whitish green, among which grow little Berries, which are green at first, and turn red by Degrees as they ripen. The Mechoacan is a winding Creeper, and differs little from Briony, only in the Figure of the Leaves and in Taste. The Root cut and dried cannot be distinguished from that of the Briony, but that the Mechoacan is of a Taste and Smell that is almost insipid, whereas the Briony has an intolerable Bitterness. We chuse the fairest Pieces of the Mechoacan that are white within and without, dry and ponderous, of an almost insipid Taste, and throw aside that which is dirty, thin and parch'd, and take Care there be no Briony mix'd among it, which is a common Cheat when Mechoacan is dear; but may be easily discover'd, in that the Mechoacan has its Lines thicker placed together and is of a sweet Taste, whereas the Briony is extremely bitter. It contains a great deal of Oil and essential Salt.

The Mechoacan being powder'd fine, is a gentle Purgative, and may be given in double the Quantity to Jalap. It is one of the best Medicines we have for purging watry Humours, and is to be preferr'd to Jalap, because it acts not with that Violence, and therefore may be administer'd both to Old and Young with Safety, in Cachexia's, Scurvies, Jaundice, or Obstructions, in Powder, with any proper Liquor, or infus'd in Wine. It is a good Hydragogue, purging watry Humours from all Parts of the Body, chiefly from the Head, Nerves, Breast and Lungs; it prevails against Catarrhs and the Venereal Disease, purges Slime from the Stomach, and is good to be given to Children against the Rickets, Kings-Evil, running Scabs and Scald Heads. You may make a compound Extract of it thus: Take Mechoacan three Ounces, Ginger two, white Turbith one, Polypody of the Oak half an Ounce; make a Tincture with Spirit of Wine, after due Digestion,

decent or strain it off clear, and add two Drams of Manna, Spirit of Vitriol five Drops, Oil of Cinnaomon three, mix and make an Extract, whereof from half a Scruple to a Scruple is a good Dose.

Mechoacan, or Rhabarbarum Album Indicum, is a white light Root, which Lemery. we have brought to us, cut in Pieces and dried, from New-Spain, and other Parts of America. This Plant is a Species of the Winding-Briony, which M. Tournefort calls *Brionia Americana repens folio anguloso*, the creeping Briony of America, with a pointed Leaf, which is large, thin and whitish. The Flowers produce small green Berries, which grow redder as they ripen; they contain in them a sharp-pointed Seed, but are of no Use in Physick, nor any other Part but the Root.

[It is the Root of the *Convolvulus Americanus Mechoacan Dietus*. Tourn. Inst. 84. R. Hist. 1. 723. *Brionia Mechoacana Alba*, C. B. Pin. 297. It was in great Esteem among the Antients, particularly in Arthritic Pains; but since the Discovery of Jalap it is quite disregarded.]

Of White Briony, or the White Vine.

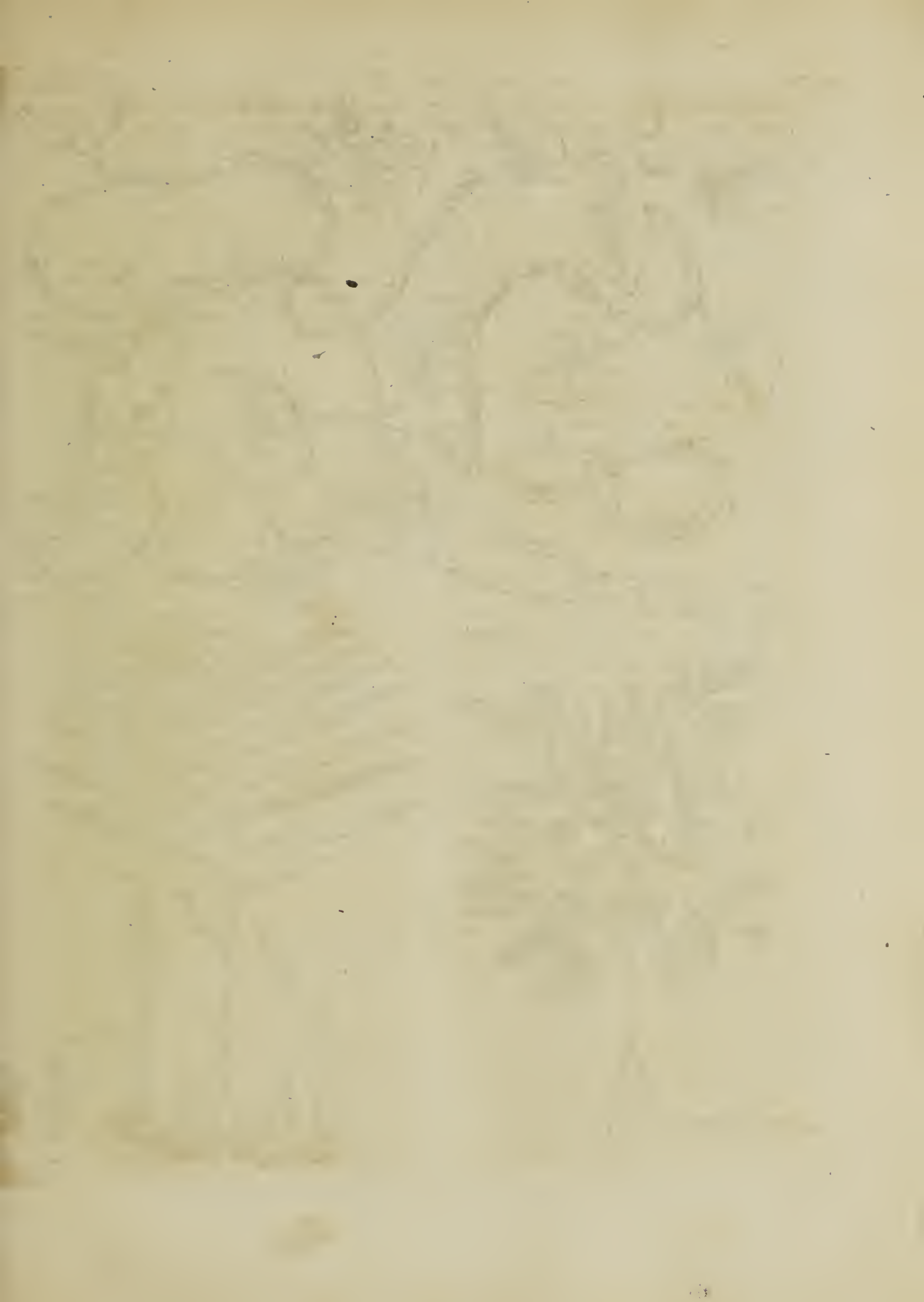
The Briony, or wild Vine, is a Plant which is so well known that it is needless to describe it; besides that, all Botanical Authors mention it, and that there is hardly a Garden or Hedge in the Country but what is full of it. The Root of this Plant is so violent, when fresh, that the Peasants call it the *Mad Neph*, which, if they happen to eat through Inadvertence, it makes them frantick, and sometimes they run the Risque of Death itself: But being dried, it is of some Use in Physick, as it has a Place in some Compositions.

The Sieur Mathurin Schille, the most famous Botanist we have had at Paris for many Ages, assur'd me that the true wild Turnep was the Briony, and that the Seed which was contain'd in the little dry Berries, was what ought to be put into the Composition of the *Venice-Treacle*. Some believe the Briony to be an excellent Remedy to cure the Biting of Serpents, and other venomous Creatures.

[The Fæculæ of Briony, when dried, are like Starch; but as this is found a Medicine of little Use, there is hardly any of it now made.]

Of Black Briony, or the Black Vine.

There is yet another kind of Briony, call'd the *Black Vine*, to which some have given the Name of our *Lady's Seal*. But as we never sell either of these two Roots, I did not think in requisite to give



7



Turbith.

8



Arabian Costus.

9



Ginger.

give you the Figures of them, and make a long Discourse upon them: But I shall inform you that the Root of this *Black Briony*, apply'd fresh upon Contusions or Wounds, prevents the Blood from coagulating and leaving a livid Spot, from whence it has obtain'd the Name of *Bruise Root*.

[These are the *Brionia Alba* and *Nigra* of almost all Authors; the *White* is never used but as an Ingredient in the *Briony Water*, in which it is reckon'd to assist as a powerful Uterine Detergent: And the *Black*, though certainly a noble Medicine, is, through the Carelessness of enquiring into the Virtues of our own Plants, entirely disregarded.]

7. Of Turbith.

Pomet. **T**HE *Turbith*, which the *Latins* call *Turpethum*, is the Root of a Plant creeping upon other Trees: The Leaves and Flowers of it are like those of Marsh-Mallows; according to the Account of many Authors, and particularly *Garicas Abhorto*, who says the Stalk runs upon the Ground after the Manner of Ivy; that the Leaves and Flowers are like those of the Marsh-Mallow, and that the better Part of the Plant is what we call the Stalk; that it has no Taste while fresh, and is found near the Sea, in *Cambaya*, *Surat*, and other Parts of the *East-Indies*.

Dr. *Paul Herman* says that he has seen it in the Isle of *Ceylon*, and other Parts of the *East-Indies*; that it is a great Creeper; that the Leaves are like the Marsh-Mallow Leaves, but something whiter, and, as it were, thorny; the Flowers are of a pale Red, like in Shape to those of the Bind-weeds, for which Reason he calls it *Convolvulus Indicus alatus maximus folio ibisco nonnihil simile, Turbith officinarum*; which signifies the *Indian Bind-Weed*, with great Leaves like Marsh-Mallows, which is call'd *Turbith* in the Shops. When the Flowers are fallen off, there remains a Pod, in which are contain'd four black Seeds, roundish, of the Bigness of Pepper.

He adds, that this Plant loves moist Ground, adjacent to the Sea, and we may assure ourselves of the Truth of what this Author says, as well because he was upon the Spot himself, as because he is a Man of Probity, and worthy our Confidence. We ought to chuse such as is well clean'd; that is, such as is split in two and has the Heart taken out, difficult to break, grey on the Outside, and greyish within, ponderous, and not rotten, but full of Resin; and reject such as is white, subject to break, and Worm-eaten. Many People use the *Thapsia* for the *Turbith*; but they may be easily enough distinguish'd by what I shall say afterwards.

The Resin of this is made after the same Manner as that of *Jalap*.

Of the White Thapsia.

The white *Thapsia*, or grey *Turbith*, is the Root of a Plant mention'd by several Authors, which has Leaves like the *Fennel*; after which grow Clusters of Flowers, like those of *Dill*, which are yellow, and the Seed large, approaching near to the Seed of *Fennel-Giant*.

This Plant is very little in Use, by reason of its violent Operation; and the Juice or Milk is so sharp, that it will take the Skin off the Face. The Root is seldom used, except by some Apothecaries, who make an ill Use of it instead of the true *Turbith*, though the Difference betwixt them is very considerable; for the *Turbith* is of a Grey, inclinable to Red without, of a white greyish Cast within, very heavy, and hard to break; on the contrary, the *Thapsia* is light, wrinkled, of a silver Grey on the Outside, and of a Taste so biting and hot, that it will blister the Mouth to touch it, especially when new.

Of the Black Thapsia.

There is another Kind of *Thapsia*, to which People have given the Name of the *Black*; but as it is not in Use in Physick I shall not describe it; and only observe, that these two Roots ought, by reason of their great Acrimony, to be placed among the violent Medicines, the Use of which is very dangerous, that Apothecaries and other Persons may take Care how they use this instead of the true *Turbith*.

[Both these Roots are brought from the *Alps* and *Pyrenian Mountains*. They must be chosen new and well fed, and such as are not Worm-eaten.]

There are several Sorts of *Turbith*; as, first, the true *Turbith*, call'd *Turpethum Alexandrinum*, and *Verum*, also *Turpethum Arobum*, from the Places where it grows. This is the best Kind, and is brought to us out of *Turky*, being large and gummy. In the Shops are the Bark and Root without the Pith, which is sticky. In the next Place, there is the *Indian*, of which *Pomet* speaks, which is a creeping Kind, and nothing near so good as the former. Thirdly, The *Pseudo-Turpethum*, or false *Turbith*, which is the Root of *Scammony*, by some Men sold for it. Lastly, The *Thapsia Turbith*, call'd *Radix-Thapsiæ*, which is a little whitish, and not much unlike the white *Dittany* Roots, or smallest *Winter's Bark*, brought to us out of the *East-Indies* and the *Streights*.

The true *Turbith* purges Phlegm and gross clammy Humours, and therefore is profitable in all chronick Diseases, as Gout, Dropsy, Jaundice, Leprosy, and the like: Being given alone, it is apt to cause loathing and vomiting, and therefore is corrected with Ginger, Cardamoms, Grains of Paradise, &c. It is given in Powder from two Scruples to four, but not to Children or Child-bearing Women: In Infusion, from a Dram to three for a Dose, and the Extract may be made like that of *Jalap*. The *Indian Turbith* purges a little, but nothing to be compar'd to the former, and therefore is but little in Use. The *Pseudo-Turpethum*, or *Scammony Turbith*, is a great Root, and in Bigness equal to the great *Briony*, as also in Tenderness; the outward Bark is of a dusky Colour, and it is white within; and the inner Pith being taken out, it seems, in all Mens Judgments to be the same with the best allow'd *Turbith* of the Shops; but herein it differs from the true *Turbith*, for that is more brittle, and will more easily be broken: The Pith also in this *Scammony Root* is no less gummy, and full of milky Juice, than the true *Turpeth*.

The *Thapsia Turbith*, or *Radix Thapsiæ*, is a thick Root, black without, white within, and full of a milky Juice, of a most bitter, sharp and loathsome Taste and Smell; so that it seems to be possess'd of a poisonous Quality. The *French* take this Root for a Kind of *Turbith*, calling it *Turpethum Cineritium*; but 'tis said that some of them have now left the Use thereof, for that in purging it mightily hurts the principal Parts, causing often cruel Gripings in the Bowels, with Convulsions, and other ill Symptoms. It grows in *Sicily*, *Apulia*, and the Island of *Thapsia*, whence, as some think, came the Name.

Turpeth is the Root of the *Convolvulus, indicus alatus maximus foliis Ibisco non nihil similibus angulosis*. R. Hist. 2. 1882. Horm. Hort. Lugd. Bat. 117.

[*Turpethum Repens foliis althææ vel indicum*. C. B. Pin. 149. *Turpethum verum seu Album Cleyeri*. It is much of the Nature of *Mecoachan*, but more efficacious, and yields a greater Quantity of Resin. The Dose is from half a Dram to a Dram, in Powder; and from a Dram to half an Ounce, in Infusion; but it is seldom given alone.]

8. Of the Arabian Costus.

THERE are three Kinds of *Costus*, *Pemet*. which are, the *Arabian*, the *Sweet*, and the *Bitter*; but we seldom receive any but the *Arabian*, which is the Root of a Shrub like the *Elder*, which grows plentifully in

Arabia-Felix, from whence it has its Name. Chuse the fairest heavy Roots, of an Ashen Grey without, and inclinable to Red within, not easy to break, of a strong Smell, aromatick Taste, together with a little Bitterness. It is aperitive, stomachick and antiscorbutick; taken in Powder from half a Dram to a Dram, and is also used in the *Venice Treacle*.

Of the Sweet Costus.

The *Sweet Costus* is a small Root, very like in Colour, Size and Figure to the *Turmeric*: But since this at present is such a Rarity that it is hardly any where to be found, and the Plant it is the Root of is unknown to us, as well as that of the *Bitter Costus*, I have not here given the Figure of either of them.

The *Bitter Costus*, which some call by the Name of *Costus Indicus*, is a thick Root, very hard, smooth, shining, and rather looks like a Piece of solid Oak than a Root. This *Costus* is not so scarce as the other aforementioned, being sometimes seen in the old Shops. We have from *Italy* sometimes the Roots of the *Agriocynera* sent us for this; others use in the Place of it the *Cortex Winteranus*, and others *Zedary*, or the Roots of the *Mentha Hortensis Corymbifera*, and others *Elecampane*; but to avoid all these Abuses, we may very well use the *Costus Arabica*, as it is the best of the three, and ought to have only the Name of *Costus*, as we may assure ourselves that the Difference in the Sorts of *Costus* were only occasion'd by the different Places they were brought from, as Mr. *Charas* has very judiciously remark'd, who takes all the *Costuses* to be the Roots of the same Plant, only growing in different Parts of the World; and that it might be that the *Costus* growing in different Parts of the same Country might receive some Difference of Form and Figure, as well as Colour and Taste, according to the Difference of the Earth from which it drew its Nourishment, as we see in Corn, Vines, &c. so that the *Arabian Costus* only ought to be used in all Compositions.

Some are of Opinion there are not two several Species, but only one of this *Lemery*. *Costus*, the newest being sweet, and call'd *Costus Dulcis*; the same, when it grows old grows bitter, and then is call'd *Costus Amarum*: that which is good is outwardly of an Ash-colour, inwardly white; and it is fresh, thick, well scented, aromatick in Smell and Taste, and not rotten: It is stomachick, hepatick, hysterick, attenuating, aperitive, discussing, good against the Cholick and Palsy, and most Diseases of the Nerves

Wild Ginger.



Eleventine Orrice.



11



Large Galangal.



Ginseng
Vide Appendix

Nerves and Womb. Dose in Powder from half a Dram to a Dram, in Tincture from a Dram to two Drams. There is an Electuary made of it call'd *Caryocostinum*, useful for the Intentions aforesaid, and a chymical Oil, which is profitable to be given in Clysters in all uterine Cafes.

[It is the Root of *Costus Indicus Viriæ Martis Odore*. Herm. Mus. Zeyl. 58. *Tsiana Cua*. Hort. Ind. Mal. xi. 15. Tab. 8.——Which grows to six or seven Feet high; the Leaves are of a lively Green, but something paler on the under Side than the upper; the Flowers are four-leav'd, white and shap'd like a Bell; the Fruit is three-corner'd, and divided into three Cells, containing a Number of triangular Seeds: The principal Occasion of its being divided into several Species, is, that it is white and sweet while fresh, and contracts a Bitterness in keeping and grows darker colour'd. It evidently is from the Beginning but one and the same Root; for the Description of the *Tsiana Cua*, in the Hort. Malab. which, according to *Commeline*, is the true *Arabian Costus*, exactly agrees with the *Sweet Costus* of our Shops.]

9. Of Ginger.

Pomet. **G**inger is the Root of a Plant which the Botanists call *Arundo humilis clavata radice acri*; that is to say, the small Club Reed with the sharp Root: It represents in Shape a Sort of Foot at the End of every Root, for which Reason the Inhabitants of *St. Christopher's*, and the other Leeward Islands, have call'd it *Patte* in *French*, which signifies a Paw or Foot, or *Gingembre*. It produces several Reeds, bearing large long green Leaves, and afterwards a reddish Flower, mix'd with a little Green, the whole Head of the Flower resembling a Club; from whence it is call'd *Ginger with the Club Flower*.

This Root was brought to us heretofore from the *East-Indies*, but that which is cultivated in the *Western Islands* is more used, and much better, because they dry it with more Care, so that it is not parch'd and wither'd. Chuse such as is new, dry, well fed, not easy to break, of a greyish Colour, resinous within, and of a hot piquant Taste; and reject that which is soft, spongy, white within and without, and worm-eaten. *Ginger* is hot and drying; it is used in the *Theriaca* and other Compositions. Great Quantities of it are used by the Hawkers and Chandlers in the Country, who mix it with their Pepper; the *French* reduce it to Powder, and then call it *white Spice*, which serves there for several Uses.

Of Candied Ginger.

The *West-Indians* candy their *Ginger* fresh taken from the Earth; likewise they make a Preserve of it green, as the *East-Indians* do; from whence we have great Quantities of green *Ginger*. The *English*, *Dutch*, and most of the northern People, make use of this to warm the Stomach, as well as to assist Digestion, and to preserve them from the Scurvy, to which those Nations are very often subject.

There are two Kinds of *Ginger*, the white or mealy, and the hard black; *Lemery*. but the first is reckon'd by much the best. It grows both in the *East* and *West Indies*, and is very much cultivated at present in the Isles of the *Antilles*; but the greatest Quantities come from the *Leeward Islands*, *Barbadoes*, *Nevis*, *St. Christopher's*, &c. as likewise from *Jamaica* and other Places thereabouts. We have now little out of the *East-Indies*, but what is brought thence is a Confection, call'd *Green Ginger*: It is very warm, attenuating, inciding, aperitive, and highly stomachick and alexipharmack; gives Ease in the Cholick, expels Wind, and is an excellent anti-asthmatick, made into an Electuary with Honey, or its own Syrup: It creates an Appetite, resists Putrefaction, expels the Plague, Poison, and all manner of malignant and pestilential Diseases. It may be used in Powder, grated or pounded, from half a Dram to a Dram, or candied to an Ounce. *Green Ginger*, which they prepare in *India*, is likewise made in *England* and other Parts, after this Manner: Let the fresh Root soak two or three Days in warm Water, keeping it in a *Balneo* all the Time; so it will grow soft and swell; then boil it up, either slit or whole, with refin'd Sugar, to a Syrup. The *candied Ginger* is made by steeping the Roots in warm Water, then cutting them into long Pieces, dry them, after which candy them.

A laxative Confection of *Ginger*, useful for cold Constitutions, to purge off watry and phlegmatick Humours, is made thus: Take *Ginger* two Drams, Cinnamon, Cloves, of each a Dram, Nutmeg, Saffron, Galingal, of each a Scruple, Turbith half a Dram, *Diagridium* three Drams, Sugar four Ounces, mix and make a Confect. Dose from two Drams to half an Ounce. Another Confection to revive and fortify a cold and weak Stomach: Take *Ginger* in Powder six Drams, Cinnamon two Drams, Nutmegs, Cloves, Mace, Saffron, of each a Dram, Pistachia Nuts one Ounce, fine Sugar a Pound, dissolv'd in Rose-water; then mix all and beat it up to a Consist-

tence, of which take the Quantity of a Walnut twice a Day.

[The Plant of which this is the Root is the *Iris Latifolia Tuberosa Zingiber dicta flore albo*. Hist. Ox. 2, 350. *Zinziber angustiore folio fœmina utriusque Indiæ Alumna*. Pluk. Alm. 317. The Leaves of this Plant are long, slender and of a pale Green; the Flowers are monopetalous, but divided into four Segments: the Seeds shap'd like a Kidney, and fastned to the Style with very slender Fibres. It is purgative, if taken in any Quantity when fresh dug out of the Earth; when dry it is aromattick and attenuant: It is found excellent in warming the Stomach and keeping the Gout from that Part.]

Of Zerumbeth and Zedoary.

These are two Roots of different Colour and Figure, which come notwithstanding from the same Plant, which has Leaves like those of *Ginger*, for which Reason some call it *Wild Ginger*. Both these Roots are brought us from the *East-Indies* and the Isle of *St. Lawrence*, where they grow in abundance.

The *Zerumbeth* is the round Part of the Root, which we receive cut in Pieces like *Galap*. It ought to be grey without and white within, hard to break, not carious, of a warm aromattick Taste; the *Zedoary*, the long Part of the Root, serving as a Foot to the *Zerumbeth*; it ought to be about the Length and Thickness of one's little Finger, of a whitish red Cast without, and white within, well fed, heavy, and not apt to break, not worm-eaten, of a warm aromattick Taste, like that of *Rosemary*. The *Zerumbeth* is of little Use in Physick; on the other hand, the *Zedoary* is esteem'd a good Cordial, and of great Efficacy against all Venom and Contagion.

[This is the Root of the *Zedoaria Zeylarina Camphoram redolens*. Herm. Cat. Hort. Lugd. Bat. 636. *Zedoaria longa seu Zedoaria Officinatum*. Com. Cat. Hort. Amst. 371. *Mathiolus* thinks the *Zedoary* of *Avicenna* to be the *Anthora* of the Moderns; and *Dodonæus* takes the *Officinal Zedoary* to be the *Zerumbeth* of *Avicenna* and *Serapion*. The Ancients had many Compositions of this Root, which are now rejected.

The *Zedoaria Longa* and *Rotunda*, as we call them, are certainly both the Roots of the same Plant; but the *Zerumbeth* is a distinct Thing, the Root of a different Plant, the *Zinziber Latifolium Sykvestre*. Herm. Cat. 636. *Kua* Hort. Malab. xi. 13. Tab. 7. It grows in *Malabar*; but the round *Zedoary* being confounded with it, makes it never seen in our Shops.]

10. Of Florentine Orrice.

*F*lorentine Orrice is the Root of a Plant, whose Leaves are long, narrow, and of a fine beautiful Green; after which grow white Flowers, as I have been assur'd by Mr. *Morin*, Physician to Madam the Dutchess of *Guise*, a Man of great Probity and large Experience in Simples.

This Plant is known in *France* by the Name of *Flower-Flag*, *Flower de Lys*, &c. It grows almost every where by the Walls, Water-sides, and in the Gardens, and is of several Sorts, which many Authors have taken Notice of. And as to the Name *Iris*, they say it was given to them for the various Colours of their Flowers, which in some measure resemble the Rainbow, call'd by some *Iris*; but 'tis a gross Error to say that the *Florentine Iris* is the same with ours, for they are very different. Chuse such of this Root as is large, well fed, of a Piece, clean, white within and without, difficult to break, of a sweet Smell like the *Violet*; but cast by such as is dirty, dry, and of no Smell; likewise such as is soft or worm-eaten.

The Dyers, Perfumers and Confectioners use this in their several Trades, to give a grateful Scent to their several Cloths, Perfumes, Comfits and the like. It has a great many other Qualities in Medicine; it is a *Hydragogue*, incitive, aperitive and cephalick: It is employ'd in several *Galenical* Compositions, and is a mighty Favourite with the Fair Sex. There is a green Colour made of our common *Iris*, to which they give the Name of *Verditer*, which is used by the Painters in Miniature. This *Verditer* is made several Ways, as is describ'd in a little Treatise of Miniature, which those who desire to make this, as well as *Carmine*, and other fine Paints, may have recourse to.

This Orrice, call'd *Iris Alba Florentina*, or *Iris major Alba*, *Illyrica vulgo*, *Lemery. vel potius Florentina*, is a white Root, the Thickness of a Thumb, oblong, which is brought to us from *Florence*, where it grows without Culture; the Stalk is like that of the *Flower-de-Luce*, but the Leaves grow erect, and the Flowers are white. This Root, when in the Ground, is deck'd with several Fibres, which are cut off with the Outside, which is reddish, and then it is dried.

The *Illyrick* Sort of Orrice is reckon'd the best, but the Roots of both are used. That brought from *Florence* is plump, round, and of a delicate fragrant Smell, like *Raspberries*. It is pectoral, and very good against Stoppages in the Breast and Lungs,



Book 2^d.
of Roots.

12.



Turmeric.

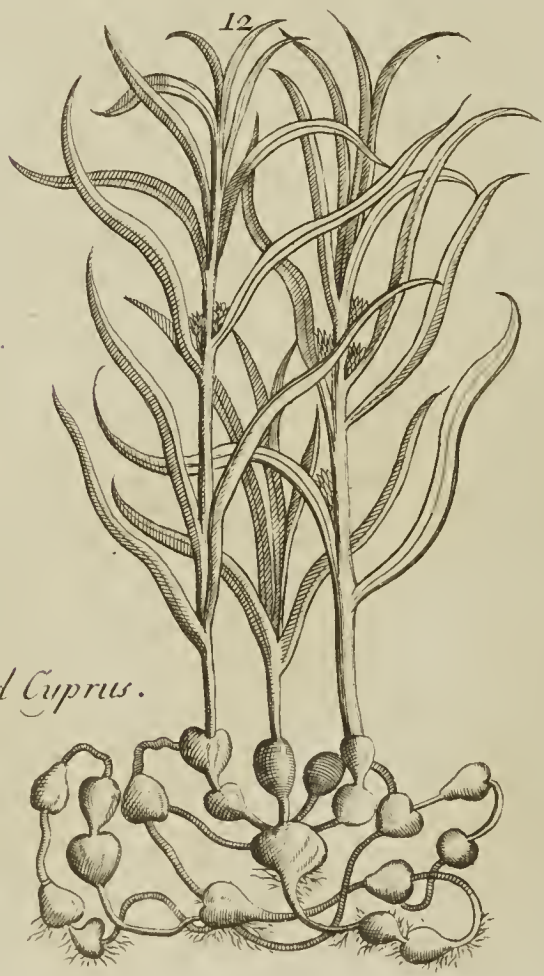
12



Long

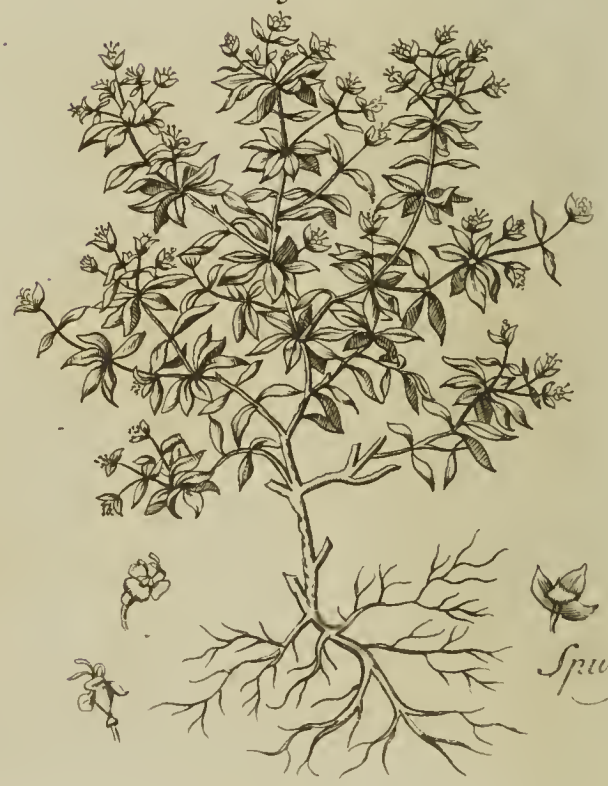
Cypris

12



Round Cypris.

13



Spurge.

Lungs, prevails against Coughs, Asthma's, Obstructions of the Terms, Gripings of the Belly, Pain in the Stomach, Wind, stinking Breath. It is used outwardly in sweet Powder for the Hair, and in Damask Powder and Cypress Powder. It may be given in Powder, Tincture, Extract, Species, or the like Form, from a Dram to two Drams.

[This is the Root of the *Iris Flore Albo*. I. B. 11. 719. *Iris Alba Floremina*. Ger. 47. It is a good Medicine to attenuate the Lympha which stuffs up the Bronchia and Glands of the Intestines: It is often join'd with Hydragogues in beginning Dropsies, to scower the Glands of the Mesentery; it is also good in Astmas, and is an Ingredient in many of our Compositions.]

11. Of Great Galingal.

Pomet. THE great or large *Galingal*, which some call amiss the *Acerus verus*, is the Root of a Plant or Reed, whose Leaves are like the *Orrice*, and which grows plentifully in the Isle of *Java* and in *China*. Make choice of the largest, heaviest Root, reddish without and whitish within, of a warm piquant Taste, and afterwards a little bitter, but throw away that which is almost insipid, which it never is 'till very old. This Root is of no other Use, that I know of, but for the Vinegar-makers, who use it instead of the less Sort for the making of Vinegar.

Of the Small Galingal.

The small *Galingal* is a reddish Root within and without, of a piquant Taste, and very aromatick, which comes to us cut in Pieces from the *Indies* and *China*. This Root bears its Branches almost like a Shrub, and the Leaves much resemble those of *Myrtle*. Chuse such Roots as are best fed, of the highest Colour, and when chew'd of a bitter aromatick Taste; and take care there be no Pieces of the great *Galingal* mix'd, which is easily known, because the small *Galingal* is no thicker than a Man's Little Finger, of a more lively Colour and hotter Taste than the larger *Galingal*. The smaller Sort is much more used in Physick than the greater, because it abounds with more Virtue.

There are two Sorts of *Galingal*, **Lemery.** brought to us from the *Indies*; the first is call'd the Great, and is a solid, heavy Root, cover'd with a reddish Bark, white within, of an acrid, and something bitter Taste. 'Tis a Sort of Species of the Reed, the Leaves like *Orrice*, the Flower white, without Smell, the Seed small, and the Whole of little or no Use in Physick.

The second Sort is the Little *Galingal*, whose Root is about the Thickness of a Finger, cut in Pieces on purpose to dry, that it may be fitted for Sale. It is hard, reddish without and white within, and of a Taste and Smell much stronger and more aromatick than the Large *Galingal*. It is cephalick, stomachick, neurotick, hysteric, and antispasmodick, sharp tasted, attenuating, opening, discussive and prevalent against most Diseases of the Head, Brain, Nerves, Womb, Stomach and Bowels. It is good against Megrims, Head-ach, Palsy, Cramps, Convulsions, Obstructions, Cholick, Indigestions, Want of Appetite, Cachexia, Scurvy, &c. You may use it in Powder, Tincture, Extract, or candied like Ginger.

[These Roots are the *Galanga Major* and *Minor* of all Authors. The Greater grows naturally in *Malabar*, the Smaller in *China*; the Larger is the Root of the *Banchale Indorum* of *Herman*; the Smaller, of the *Lagondi Indorum* of the same Author. The Smaller, which is most in Use, is an admirable Ingredient in Bitters, and in all Compositions that answer the Intentions of a Cordial or Cephalick.]

12. Of Turmerick.

Turmerick, which some call *Curcuma*, and others *Saffron*, or *Cypress* of *India*, *Malabar*, or *Babylon*, is a Root which is yellow quite through, and produces very large green Leaves; the said Root sends forth Flowers, which grow like Ears of Corn, as may be seen by the Figure, which I have caus'd to be engrav'd from that in *Herman*. This little Root is almost like *Ginger*: It is brought to us from several Parts of *India*, by the Company of Merchants trading thither, and likewise great Quantities of it come from the Isle of *St. Lawrence*.

Chuse your *Turmerick* large, fresh, resinous, hard to break, and the heaviest and least worm-eaten or dusty, or inclinable to be rotten, that you can get. There are a great many Persons about *Paris* who ask for the *Red Turmerick*, as believing there are two Sorts, when in reality it is nothing but the Age of it that turns it brown; when it is powder'd it shews more or less red, according as it is older or newer. This Root is chiefly used by the Dyers, Glovers, and Perfumers: The Founders employ it to tinge their Metals, and the Button-makers to rub their Wood with, when they would make an Imitation of Gold. The *Indians* use it to tinge and give a yellow Colour to their Bread, or other Things, as we do *Saffron*.

[It is the Root of the *Cannacorus Radice Crocea*, *five Curcuma Officinarum*. Tourn. Inst. 367. *Curcuma radice longa*. Herm. Cat. 208. The Leaves of this Plant are like those of the *Cannacorus*, but the Flowers on a separate Stalk, four Leav'd; the Seed-Vessels small, membranaceous, and triecapsular, the Seeds round and of a dusky Brown.

There are two Kinds of this Root, as of *Zedary*, the long and the round, the long is most used in Physick. Its particular Use is in the Jaundice: The Dose is from twelve Grains to half a Dram.]

Of Round Cypress.

The *Cypress*, commonly call'd *Round Cypress*, or *English* or *Flemish Cypress*, is a Root full of little Knots or Specks, of a brown Colour without, and grey within, of a little Sharpness in Taste, and almost without Smell when it is newly taken out of the Ground. This Root grows in the Water, and along Banks and River Sides, bearing triangular Stalks, solid and smooth; and long upright Leaves; the Flowers are small, reddish, and come by Ears or Tassels on the Top of the Stalks. Make a Decoction of this Root, bruis'd in White Wine, and after it is strain'd, drink the Wine as hot as possible. 'Tis an approv'd Remedy to cure the Cholick.

Of Long Cypress.

Long Cypress, call'd by some *Wild Galingal*, is a knotty Root, wrapp'd round with fibrous Strings, not easy to break, of a brown Colour without, and grey within, of a pleasant Scent, especially when fresh, and well dried. This Root grows by Rivulets, and other watry Places, as Ditches, and the like; it bears green Leaves, which are like those of the Leek; the Stalk and Flower very much resemble the round Cypress: It is of Use in Physick, as a Cordial, Diuretick and Cephalick, a Resister of Poisons, and Expeller of Wind: The Dose is from half a Dram to a Dram in Powder, and from two Drams to half an Ounce in Infusion. But it is of much more Use to Perfumers and Glovers.

Terra Merita, or the *Curcumma* of *Lemery*. the Shops is a small Root, about the Size of that of Ginger, hard, as if it was petrified, yellow without and within; it grows in many Parts of the *East-Indies*, from whence it is brought to us dried. The Plant is call'd *Cyperus Indicus*, and *Grocus Indicus*, or *Indian Saffron*. The Leaves are like the White Hellebore, but not so much ribb'd, but smooth. The Flower is of a fine beautiful Purple, which

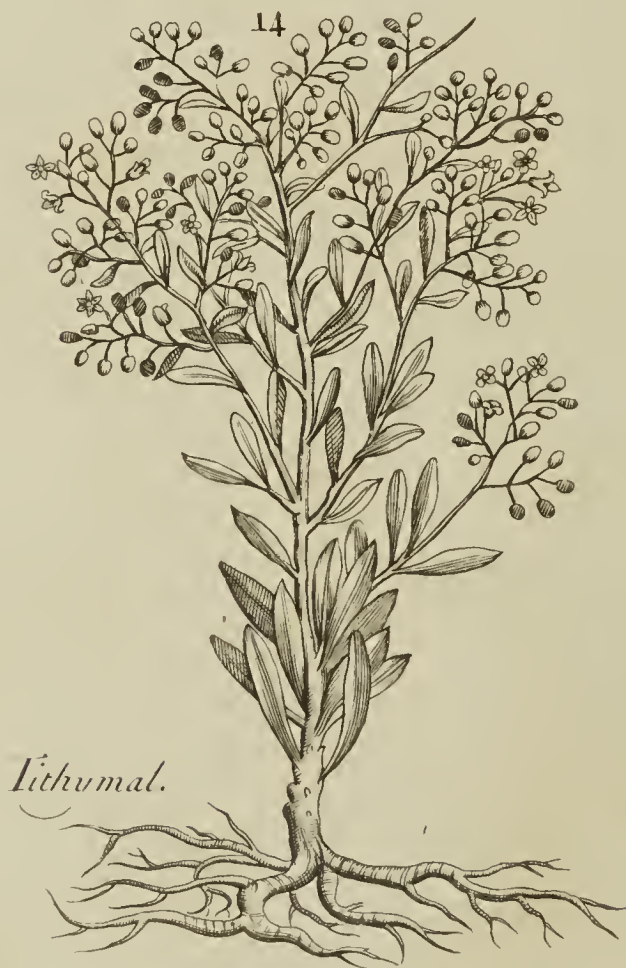
is succeeded by a Fruit which is hairy, like the Green Chestnut, and which contains a Seed made round like a Pea, which is very good to eat, when it is boil'd with Meat. The Root is yellow, like Saffron, and the *Indians* use it to colour their Rice, and several other Sorts of Provisions: It contains a good deal of Oil in it, as well as fixed and essential Salt. This *Turmerick* is aperitive, deterfive, proper to relieve Obstructions of the Liver and Spleen, to provoke Urine, and Women's Courses, and good in the Yellow Jaundice, Stone and Gravel, either in Powder or Decoction.

Cyperus, in *French Souchet*, in *English Wild Galingal*, is a Plant whereof there are several Kinds; but I shall only speak of two; and first of *M. Tournefort's Cyperus rotundus vulgaris*, or the common Sort, which is call'd the round Sort, whose Leaves are long, with the three corner'd Stalk, and Flowers on the Top like a Plume or Noddy; after the Flowers are gone, on the Head of every Stem, comes a triangular, hard, black Seed: The Root is as thick as an Olive, of an oblong Figure, grey Colour, weak Smell, sweet Taste, and a little astringement.

The second Kind is by *M. Tournefort* call'd *Cyperus odoratus radice longa*, *five Cyperus Officinarum*: The sweet-scented *Cyperus* with the long Root, or that of the Shops. It bears Leaves like those of the Reed, and resembling in some Manner the Leek, but much longer, much slenderer, much harder: The Stalk grows two Feet high, strait without Knots, triangular, full of white Pith, bearing on their Tops large reddish Clusters, with a Seed like the former Sort, as the Virtues are in like Manner: Both long and round, being used to one and the same End and Intentions; the round is esteem'd the best, but some think the long to be full as good. They cure a stinking Breath, being chewed in the Mouth; boil'd in Oil, and bruised, laid to the Reins or Groin, they provoke Urine; they are stomachick, hepatick, uterine, and nephritick; help a weak Stomach, cause a good Appetite and Digestion, expel Wind in the Bowels, and corroborate all the internal Parts; may be given in Powder, Tincture or Decoction. Dose from half a Dram to a Dram.

[These are the Roots of the *Cyperus longus* and *rotundus* of most Authors. The long is of our own Growth, tho' not very common; the round we have from the *East-Indies*, instead of which sometimes the Roots of the *Cyperus rotundus nostras* & *vulgaris*. C. B. Pin. are used, but they are less aromatick, and of less Efficacy; they are recommended as good in nervous Cases, but are but little used at Present.]

Book 2^d.
of Roots.



13. Of Spurge.

Pomet. **E** *SULA* or *Spurge* is the Bark of a small red Root, which produces narrow green Leaves, full of Milk. This Plant grows every where in *France* neglected, and the Roots which are sold come from *Provence* or *Languedoc*. Chuse such as is new, the fairest red Root without and within; which being held in the Mouth, affords a very disagreeable Taste, attended with great Acrimony. This small Root is very little used in Physick; but there is an Extract made of it which is appropriated to hydropick Cafes.

The *Esula* or *Spurge*, is a Kind of *Lemery*. *Tithymal*, or a Plant which bears many Stems, of about a Foot high, carrying straight narrow Leaves, like those of the Pine, fill'd with Milk; the Flowers are small and grassy, the Root little and red. This grows in Fields, Lanes or Gardens, and abounds with an essential, fix'd, acrid Salt, as well as Oil. 'Tis rarely used in Medicine, because it purges violently, except in some desperate Cafes, as Dropsies, Lethargies, Phrensies, &c. There are several Sorts of this Plant, all which have the like Qualities, but that which bears Leaves like the Pine is esteem'd the best. It is a sharp, fiery, corroding Medicine, and reckon'd so dangerous as not to be used without correcting, which is chiefly done by steeping it in Vinegar, or by adding *Bdellium*, *Tragacanth*, or Mucilage of Fleabane-Seed to it. There is the greater and less Sort, both which grow in most Parts of *Europe*. They purge Phlegm downwards, for which they have been accounted wonderful Secrets in some deplorable and suppos'd incurable Cafes. There is an Extract to be made of it, which some have used as a Kind of *Panchymagogon*, or general Purger.

[This is the Root of the *Esula Rivini* & *Officinarum* Ray *Tithymalus foliis Pini forte Dioscoridis Pityusa*. Tourn. Inst. 86. It is cultivated in the Gardens of the curious, but is grown quite out of Use as a Medicine.]

Of Cinquefoil, or Fiveleav'd-Grass.

The Root foregoing has given me *Pomet.* occasion to mention another Root, in Figure and Colour very like the *Spurge*, which the *Greeks* call *Pentaphyllum*, the *Latins* *Quinquesolium*, and we *Cinquefoil*, by reason this small Root produces its Leaves by five and five on a Stem.

It is very common on the Banks of Ditches, and by Way-sides. It is very little used in Medi-

cine, and would not have been mention'd here but as it is an Ingredient in the *Theriaca Andromachi*.

Cinquefoil is so well known it needs no Description. It grows in sandy *Lemery*. Places, in Fields and Hedges, and flowers in *May* and *June*. The Root, which is dry, binding, and antefebriick, is used in the Shops, and given from a Dram to two Drams in Powder, in all Respects as you give the *Cortex*, to cure Quotidian, Tertian, and Quartan Agues. It stops Fluxes of the Bowels, Catarrhs, or Defluctions upon the Lungs, Coughs, Colds, Gout, Whites or Gonorrhoea in Men and Women, Sharpness of Urine, &c. An Infusion of it in White Wine, is profitable for the Rickets in Children, Obstructions in young People, either of the Spleen, Liver, or Menfes, and to cure the Jaundice. Dose four or six Ounces; it may be likewise taken like an Infusion of the Bark, and to the same Purpose.

[It is the Root of the *Pentaphyllum vulgatifimum*. Park. 398. *Quinquesolium vulgare*. Ger. It is very common, and Flowers in *June* and *July*. *Schroder* runs through most Chronical Distempers in its Commendation; but the present Practice entirely neglects it.]

14. Of Spurge Flax.

Spurge Flax, which is call'd *Thymelæa*, is a light Root, of a different *Pomet.* Thickness and Length, reddish without, and whitish within, woody and fibrous; of a sweet Taste at first, but after it has been chew'd in the Mouth a little Time it is caustick, and burns like Fire, especially when it is fresh.

This Plant produces green Leaves, thick and clammy, in Shape like those of Flax, with Fruit of the Size of Pepper, green at first, and of a beautiful Red when ripe, which the *Latins* call *Coccus Gnidius*, or *Gramm Gnidium*, the *Scarlet Berry*. The whole Plant is very little in Use, except the Root, which is put into the Bottom of the Ear, which must be bor'd for that Purpose, to draw sharp Humours from the Head which fall on the Eyes. That which comes from *Languedoc* is to be preferr'd to that brought from *Burgundy*.

It is be chosen new, well fed, and the least worm-eaten that may be.

The *Thymelæa foliis lini*, of Monsieur *Tournefort*, or *Thymelen*, with Linseed *Lemery*. Leaves, is a little Shrub whose Trunk is about the Thickness of a Thumb, divided into several Twigs or Branches of about a Foot and a half high, with fine small Leaves, like those of Linseed,

Linseed, but larger, greener, and more viscous; the Flowers grow on the Tops of the Branches, collected together in several little white Clusters: After that comes a round fleshy Berry, like that of Myrtle, full of Juice, which is red when ripe, and call'd *Granum Gnidium*. This Fruit contains an oblong Seed, cover'd with a black shining Skin, very brittle, having a white Pith, of a hot fiery Taste. The Root is long, thick, hard, woody, grey, or reddish on the Outside, white within, sweetish at first tasting, but very caustick and biting afterwards, abounding with a great deal of acrid Salt, and fix'd Oil.

[This is the *Thymelæa monspeliaca*. I. B. 591. *Thymelæa foliis Lini*. C. B. Pin. 463. It is cultivated in the Gardens of the curious. The Fruit of this Plant is now universally allow'd to be the *Granum Gnidium* of the Shops, though *Cordus* and *Schroder* have both affirm'd that the *Grana Gnidia* are the Berries of the Mezereon; but the Dispute is not of Consequence enough to be worth enquiring into here, as both the one and the other are now altogether out of Use.]

Of the Pareira Brava.

The *Pareira Brava*, which the *Indians* call *Botua*, is a Root we have of late Years receiv'd from *Brazil*. It is in Figure very like the Root of the *Thymelæa*, but that it is blacker and closer in its Texture: While it is in the Earth it sends up Branches like those of the Vine.

It must be chosen fresh, such as is truly from *Brazil*, and not adulterated nor worm-eaten. The first who brought it to *Paris* was Monsieur *Amelot*, Embassador in *Portugal*, and after him *M. Tournefort*, who gave me a Piece, the Figure whereof is here represented.

M. Amelot, *M. Thevard*, of the Faculty of Physick, and some others, have recommended it as a Specifick for the Cure of the Stone, to be taken in Powder in a Morning fasting, in White-Wine. For Choice of this, *M. Thevard* thinks that of *Mexico* to be much better than that which comes from *Portugal*: And in a Letter which I receiv'd from *Lisbon* the 16th of *October*, 1692, it is observ'd, "That the *Pareira Brava*, which comes from the *Indies* and *Brazil*, is a Root so common, that almost all the Apothecaries there keep it, but not many in great Quantities. It is sold at ten Testons, which is about five Livres French Money, a Pound.

[This is the Root of the *Convolvulus Brasiliensis flore infra petalo monoccus*. Rai. Hist. 2. 1331. *Pareira*, *Ambutua*, *Butua*, *overa Brutua*. Ind. Med. 89. This Root is brought to us in

Pieces of different Sizes; the Bark is brown and rough, when cut the inner Fibres appear circular: The Taste is sweetish, with a Mixture of Bitterness. It is said to grow in *Brazil*, because we have it from the *Portuguese*; but it has been sent also from the Coast of *Malabar*. It is unquestionably a noble Medicine in the Nephritick Cholick. It seems to act by dissolving the slimy Matter contain'd in the Kidneys and Bladder; it is also good in Hepatick Cholicks, arising from an Obstruction of the Orifice of the Gall Bladder. The *Portuguese* esteem it as an Antidote and Alexipharmick, and use it powder'd for Quinceys, and Discaes of the Thorax.]

[There is another Species of it, call'd *White Pareira Brava*, harder than the former, and yellowish within; said also to come from *Brazil*, but it has never yet been used.]

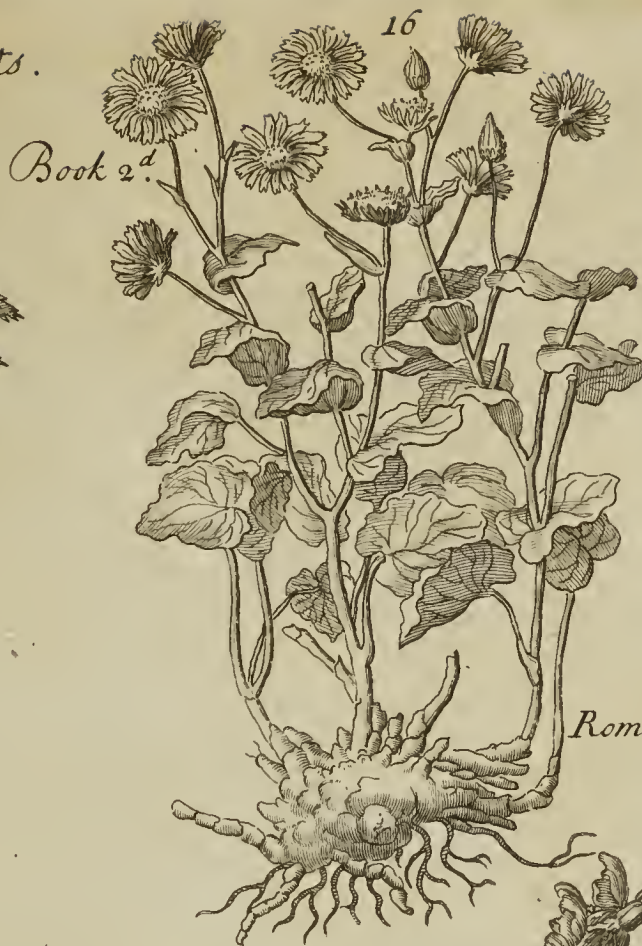
15. Of White Hellebore.

WHITE Hellebore, call'd in *Latin* *Veratrum Album*, is a Plant which *Pomet.* grows on the Mountains of *Dauphine* and *Burgundy*, whose Root is white, with many long fibrous Strings of the same Colour; the Leaves of the Plant are large, green at first, and of a yellowish Red afterwards, the Stalks, which are hollow, bear a great many little Flowers like Stars. We ought to chuse such Roots as are fairest, full of Filaments or Fibres, yellow without, and white within, of an acrid ungrateful Taste; some value those Roots which are cleansed from the Fibres, which I do not disapprove, especially when it is to be powder'd.

Of Black Hellebore.

This is a dark, brown Root, full of small Fibres, black on the Surface, and grey within, from whence arise green Stalks, adorn'd with Leaves of the same Colour, indented, and Carnation colour'd Flowers like a Rose. Make your Choice as before directed: This is of much greater Use for internal Medicine than the last. This is brought us from the *Alps* and from the hot Countries.

The *Veratrum flore subviridi*, of *Tournefort*, or the *White Hellebore*, *Lemery.* rises on a Stalk of two or three Feet high, round, straight, hollow, surrounded at the Bottom with abundance of Leaves like *Gentian*, but much larger, more stringy, striped and plaited lengthways, soft and a little hairy; the Leaves, which are pretty high on the Stalk, are at a great Distance from one another. The Flowers grow on the Top, rang'd like long Ears, of a whitish green



green Colour, each of which is compos'd of several Leaves, dispos'd like a Rose, to which a Fruit succeeds, in which are contain'd longish white Seeds, almost like Corn. The Root is a thick, white Head, furnish'd with a great many long Fibres of the same Colour.

The other Sort is the *Hellebore*, call'd by M. *Tournefort*, *Veratrum flore atro rubente*; it differs from the former, in that the Leaves are much narrower, folding about the Stalks, and that the Flowers are of a brown, or dark red Colour. Both one and the other Kind grow in mountainous and wild Places, especially in the hot Countries. No Part is us'd in Physick but the Root, which is brought dried from *Dauphine* or *Burgundy*; it contains a deal of volatile Salt and essential Oil in it.

The *Black* as well as *White Hellebore*, purges upwards and downwards, and is said to cure all Diseases proceeding from Melancholy, as Disaffections from the *Hypochondria*, *Elephantiasis*, *Herpes*, *Cancers*, *Quartans*, and all Diseases of the Head and Brain, as Epilepsies, Apoplexies, Lethargies, and Madnes, for which all Authors have held it a Specifick. It enters into the Composition of *Matthews's* excellent Pill, and may be given in Powder, alone, to a Scruple: It likewise mixes well with the larger purgative Compositions.

[These are the Roots of the *Helleborus albus* and *niger*, of most Authors. They are both common in the Gardens of the Curious.

The *White* is us'd as a Sternutatory, and mix'd in Ointments to cure the Itch: It is never now given inwardly; *Boerhaave* very justly observed, That it is a Medicine much fitter for Horses than for Men.

The *Black* has been in great Esteem among the Antients in the most obstinate Chronic Cases. It does not operate much by Stool, but is a powerful Alterative: It almost infallible in Obstructions of the Menfes, and may be often given in such Cases where Steel cannot without Danger; for tho' Steel and the *Hellebore* both promote the Menfes, they do it different Ways; one by encreasing the Blood's Velocity and giving it a greater Momentum in the Uterine Arteries, and the other by dividing it and rendering it more fluid.]

16. Of Roman Wolfsbane.

THE *Doronicum Romanum*, which *Pomet.* we call *Roman Wolfsbane*, is a little Root, yellow without and white within, of a sweetish astringent Taste, attended with a little Viscosity. We have this Root brought to us cleansed from its Strings, from the

Mountains of *Switzerland*, *Germany*, *Provence* and *Languedoc*: The Root, when it grows, is of the Figure of a Scorpion's Tail, from whence arise large Leaves, something resembling wild Cucumber, or Plantain; this is the Reason why it is call'd *Aconitum pardalianches Plantaginis folio*, or *Panther's-bane* with the Plantain-leaf. Chuse the fairest Root, and not such as is inclinable to be worm-eaten, well tasted, and when bruised, of a good white Colour: It is believ'd that this being chew'd in the Mouth, becomes an Antidote for Men, tho', on the contrary, it is a mortal Poison to all Quadrupeds. It is cephalick, cordial and alexipharmack, resists Poison, is good against the biting of venomous Creatures, and cures the Palpitation of the Heart.

The *Doronicum Romanum* of *Gesner*, or that which *Tournefort* calls the *Doronicum radice Scorpæ*, the *Wolf's-bane* with the *Scorpion Root*, is a Plant which bears large Leaves, Swallow-tail'd, green, woolly, and very like the Cucumber, but much less and softer; the Stalk is above a Foot high, something lanuginous, round, divided at the Top into several small Branches, which bear yellow radiant Flowers, like those of the *Chrysanthemum*, or *Sun-flower*; those are succeeded by little, thin black Seeds, each one having a spiral Head; every Root resembling a Scorpion. This Plant grows on the Mountains of *Switzerland*, near *Geneva*, and in several Parts of *France*, *Germany*, &c. from whence these Roots are brought dried to us. It is a proper Counter-poison, good to fortify the Spirits, and drive away malignant Diseases by Perspiration, and to expel Wind, in hypochondriack, cholicky Disaffections.

[This is the Root of the *Doronicum majus officinarum*. Ger. 630. *Aconitum Pardalianches*. Mont. 35. It is kept in the Gardens of the Curious, and flowers in *July*. It is said to be an Alexipharmack, &c. but is never us'd in the present Practice; nor indeed is it fit it should be 'till we are more certain of its Effects; some Authors calling it a Good Medicine, and others a Poison, which indeed is the most probable. The *Doronicum Plantaginis folio*, is another Species, call'd also the *Doronicum minus off.* but as neither are very likely to be us'd, the Distinction is of no Consequence here.]

17. Of the Greater Thora, or Panthers-Bane.

THIS is a Kind of Plant which grows no where but on the high Mountains, and is call'd *Thora Major*, *Pomet.* *Wolf*

Wolf or Panthers-Bane : It is a Root divided into Lumps, or Clods, like the *Ranunculus*. The Leaves are almost round, indented about, and supported by tender Pedicles; the Stalks are not above seven or eight Inches high, branched at top, and adorn'd with certain yellow Flowers, composed of four Leaves, among which stands a small Cluster of Seeds, like those of the *Ranunculus*; and when the Flower is gone the Seeds grow to the Shape of those of the common *Ranunculus*. The Juice of this Plant is used to poison Flesh with, for the Destruction of the Wolf, the Fox, and other ravenous Beasts.

This Plant is call'd *Thora*, which signifies Corruption, because it is venomous: According to *Tournefort*, it is the *Ranunculus Cyclaminis Folio, Asphodeli radice*. This is a Kind of *Ranunculus*, or a Plant which from the Root produces two or three Leaves that are almost round, like those of the *Cyclamen*, but near as big again, indented on the Sides, fibrous. tied by Stalks, which bear them about half a Foot high, or more: The Flowers grow on the Top like a Rose; the Seed is Swallow-tail'd and flat; the Root is like the *Asphodel*, and yields a great deal of acrid corrosive Salt and Oil.

[This is the Root of the *Thora Valdensis*. Ger. Emac. 966. *Thora folio Cyclaminis*. J. B. 3. 650. It is kept in the Gardens of the Curious, but is not used in Physick, being esteem'd a Poison.]

Of the Anthora, or Healing Wolfs-bane.

The *Anthora*, according to Monsieur *Pomet*. *Tournefort*, is a Species of the *Aconite*, though this is a Counter-poison to such as eat the Root of the poisonous *Aconite*, or deadly *Wolfs-bane*. It is for this Reason *Baughin* calls it *Aconitum Salutiferum*, the *Healing Aconite*, or *Anthora*. This is composed of two short wedge-like Roots, very bitter, white and fleshy within, but brown on the Outside, and deck'd with abundance of Fibres. The Stalk arises about two Feet high, surrounded with Leaves resembling those of the *Larkspur*; the Flowers grow about the Stalk like an Ear of Corn, they are yellowish, and like a Head cover'd with a Helmet; the Seeds are black, wrinkled, and grow in Sheaths, or membranous Cells, five or six of them together. The Root of this is a good Antidote: The Peasants who gather this on the *Alps* and *Pyrence*s, use it with Success against the biting of mad Dogs, and to cure the Cholick; they take it for a sovereign Remedy for those who eat the *Thora*, or deadly *Aconite*.

The *Aconitum Salutiferum*, is call'd *Anthora*, quasi *Antithora*; because this *Lemery*. is reckon'd a Counter-poison to that call'd the *Thora*, which is a Sort of *Ranunculus*, or *Crowfoot*. This *Anthora* is of the Species of the *Aconite*, or deadly *Wolfs-bane*, as described fully before by *Pomet*. The Root is useful in Physick, as being alexipharmack, cardiack, stomachick, and good against the Wind-Cholick: It contains a great deal of volatile Salt and essential Oil.

[This is the Root of the *Anthora sive Aconitum Salutiferum*. Ger. 820. *Antithora flore luteo aconiti*. I. B. 3. 660. It is cultivated in the Gardens of the Curious, and flowers in June. The Root is of a dusky Brown without and whitish within, of an acrid Taste and unpleasant Smell; it is accounted a Cardiack and Resister of Poison, and is an Ingredient in the famous *Orvietan*, and is thought to have the same Virtues with the *Contrayerva*; but is at present very little used.

18. Of Angelica.

Angelica is a Plant which grows plentifully in *Bohemia*, *Spain*, *Italy*, *Pomet*. *France*, *England*, and most Parts of *Europe*, and is so well known, it would be needless to describe it. The Seed is much us'd to make *Angelica Comfits*, and the Stalk makes a very good Sweetmeat candied. The Root is seven or eight Inches long, of an odoriferous Smell, and aromattick Taste, flexible, and, if new and fresh, breaks white within. It grows in all our *English* Gardens; yet notwithstanding some is brought us from *Spain* and *Germany*. Take Care of buying the Roots of *Meum*, or *Spiguel*, which are sometimes offer'd to Sale instead of it to ignorant Persons. It is cordial, bezoartick, and alexipharmack, heats, dries, opens, attenuates, and causes Sweat, resists Poison, and cures the Bitings of venomous Creatures. A Spirit of it cheers the Heart, and revives the Spirits to a Miracle. The chymical Oil operates more powerfully than any of the former, to all Intentions. Besides which, it provokes the Terms, expels the Birth, resists Poison, helps Suffocation of the Womb, cures Palsies, Apoplexies, Convulsions, Cramps, and Rheumatisms. It ought to be chosen in fair large Roots of a dusky Colour without, and white within, and not Worm-eaten, of an agreeable aromattick Taste, with a little Bitterness.

This Root, whose Plant is so vulgarly known, grows best in a fat Soil, *Lemery*. where the Ground is full of Moisture. It is brought ready dried to us from several Parts, but



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of Roots.

19.

Plate 17.



but the best is that from *Bohemia*, and then what is brought from *England*; of a sweet Smell, and aromack Taste, that overcomes the bitter, being loaded with a highly exalted Oil and volatile Salt. It is cordial, stomachick, cephalick, aperitive, sudorifick, vulnerary, resists Poison, is us'd in the Plague and malignant Fevers, and for the Biting of mad Dogs.

[This is the Root of the *Angelica Sativa*, of most Authors; it is cultivated in Gardens, and flowers in *June*: It is a warm, fragrant, and aromack Root, much esteem'd as a Carminative and Cordial, and is an Ingredient in many Compositions.

19. Of Masterwort.

Pomet. **I**mperatoria, Magistrantia, or Masterwort in *English*, is the Root of a Plant which has large, green, indented Leaves, after which grow Clusters of white Flowers, succeeded by a small Seed, like that of the *Angelica*. Chuse such Roots as are fair and fresh, hard to break, of a brown Colour outwardly, and greenish within, of a strong Smell, and aromack Taste: Those that grow in *Auvergne*, and other mountainous Parts, are prefer'd to those of the Garden. The same Virtues are ascrib'd to this as to *Angelica*. Its Name of *Imperatoria* was given it partly for its excellent Qualities, and partly because an Emperor made the first discovery of them.

Lemery. *Imperatoria major* of *Tournefort*, is a Plant whose Leaves are large, rang'd three and three along the Side of the Stalk, ending in a single Leaf; they are stiff, hard, and divided each into three Parts, indented on one Part lightly, on the other deep. They rise among the Branches all along, which mount about two Foot high, dividing themselves into Wings, which carry upon their Tops Clusters of Flowers of five Leaves form'd into a Rose, succeeded by little Seeds, which are flat and almost oval, little larger than those of *Dill*; streak'd lightly behind, and of a white Colour. The Root is sometimes of the Thickness of one's Thumb, wrinkled, hard, and entangled in Fibres, fill'd with a white, aromack Substance of an acrid piquant Taste, hot in the Mouth, and a little bitter.

This Root being hot and dry, attenuates, opens, digests, strengthens, is sudorifick and alexipharmack, is us'd against Poisons, malignant and pestilential Diseases; causes Expectoration, cures a stinking Breath; relieves Diseases of the Head, as Vertigoes, Apoplexies, Palsies. A Decoction of it in Wine, us'd as a Gargle, cures the Tooth-

ach, dries up Rheum and Catarrhs, and is good to bathe with in the Gout: A Saline Tincture is much better than the Decoction to cure the Itch, and dry up scabby and scald Heads: An Ointment of it made with Hogs Lard and Turpentine, heals old Sores, Ulcers, and all foul, leprous, and malignant Scabs.

[It is the Root of the *Imperatoria major*, C. B. Pin. 156. *Imperatoria sive Astrantia Vulgaris*, Park. 942. It is a good Medicine in many Cases, particularly Jaundice, Cachexies, and Dropsies; because it promotes the Secretions by Urine, as well as by the Skin, but is not so much us'd in the present Practice as it deserves.

20. Of Gentian.

Pomet. **G**entian is a Plant so called from King *Gentius*, who first discover'd its Virtues. It grows plentifully about *Chabli* in *Burgundy*, and other moist Places in several Parts of *France*, especially about the *Pyrenees* and *Alps*.

The Root, which is the only Part of the Plant that is sold, is sometimes as thick as one's Arm, divided into several Roots, of a Thumb, or Finger's Thickness, yellowish, and of an intolerable Bitterness; the Leaves in some manner resemble those of Plantain, and grow two and two upon every Joint of the Stalk; they are smooth, green, pale, and ridg'd Lengthways with Nerves, which stand pretty high, particularly on the Underside. The Stalks are strait, strong, of two or three Feet high, deck'd with yellow Flowers in *June*, which are dispos'd in Rings, in the Joinings on of the Leaves. Each Flower is of one Piece, divided into five Parts, very narrow, and sharp pointed: The Style, which is in the Middle, produces a Capsula, in which are enclosed several round Seeds, but very flat, which are ripe in *July*.

Chuse such as is of a middling Size, fresh, well dried, because it wastes considerably in drying, and that which is freest from small stringy Roots and Dirt; it is much recommended, being powder'd and mix'd with the *Theriaca*, for the Bite of Mad Dogs. Take Care also that it be not dried in an Oven, which you may easily distinguish, because such will be black within; but, on the contrary, that which is dried in the Air, will be of a Gold-colour'd Yellow. This Root is reckon'd useful to resist Poisons and the Plague; and therefore is properly mix'd in the great Compositions: It is sudorifick, and given with Success in Intermitting Fevers; for which it has receiv'd the Name of the *European Kinkina*, the same Name as is given to the *Peruvian*, or *Jesuits Bark*.

This is the *Gentian* describ'd by *Lemery*. *Ray*, in his History of Plants, call'd *Gentiana vulgaris major Ellebori albi Folio*: The larger common *Gentian*, with the white *Helebores* Leaf. The Plant is sufficiently describ'd before, the Root is wrinkled when dry'd, and shrunk much from its former Size. It grows generally every where in the warm Countries, but more particularly on the Mountains of the *Alps*, the *Pyrenees*, and in *Burgundy*, abounding considerably in Oil and essential Salt. The whole Root is esteem'd better than that which is slit; and it is likewise brought in good Quantities out of *Germany*. It is hot and dry, pectoral, alexipharmick, antiscorbutick, opens Obstructions of the Lungs, resists Poison, and is good against all Diseases proceeding from Putrefaction, as Measles, Small-pox, Plague or Pestilence: It cures the Scurvy, and is beneficial against Cachexies, Dropsies, Jaundice, Ulcers of the Bladder, Sharpness of Urine, &c. May be given either in Tincture, Infusion, Decoction, or Powder. Dose; a Dram of the Powder.

[It is the Root of the *Gentiana major lutea*, C. B. Pin. 187. *Gentiana vulgaris major Ellebori albi Folio*, L. B. 3. 520.—It is cultivated in the Gardens of the Curious, and flowers in *June*. The Root ought to be gather'd in *September*. It is extremely bitter, but leaves rather an agreeable than a nauseous Gust behind it. It deservedly stands at the Head of the Stomachick Class; and is the best Ingredient we know of in Bitters. It is recommended in many other Intentions, but is only used in this in the present Practice.]

21. Of White Dittany.

Pomet. WHITE Dittany, or *Fraxinella*, is a Plant whose Roots are white, finaller than the little Finger, something bitterish, of a pretty strong Smell: The Stalks are two Feet high, reddish, with Leaves like the Ash, and charg'd at the Top, with large Flowers in Spikes of a whitish Red mix'd with Purple, compos'd of five Leaves, sharp pointed, and with long crooked Strings or Filaments: In the Middle of which Flower is produced a Head divided into five Capsules, in which grow black shining oval Seeds, pointed at the Ends. Chuse the plumpest Root, white within and without, and least burden'd with small Fibres, and the cleanest that can be had. This Plant flourishes in the Forests of *Provence* and *Languedoc*. The Root is reckon'd alexiterial, uterine, and diuretick: It kills Worms, cures malignant Diseases and Calentures. *Swelfer*, *Gharas*, and most of the modern Authors, substitute the Powder of this Root for the

Farina Orobi, to make the Troches of Squills for the *Venice Treacle*.

[This is the Root of the *Diſtamnus albus vulgoſus Fraxinella*, C. B. Pin. 222. *Fraxinella vulgaris*, Park. 417. It is cultivated in Gardens, and flowers in *July*. This is, in all Probability, one of the two *Tragiums* mention'd by *Dioscorides*; the other of which is a Species of the *Stæchas*.

This Root has had many Virtues attributed to it, but at present is only known as an Ingredient in several of our Compositions.]

22. Of the White Carline Thistle.

THE White Carline, call'd by some the White *Chamæleon*, or little *Chardon*, is a Plant, the Roots whereof are not much thicker than a Man's Thumb, brown on the Outside, and white within, from one to two Foot long, of a strong Scent, and agreeable Taste enough. The Leaves hang quite round it, lying to the Ground, of a pale Green, wav'd, and deeply indented, on each Side furnish'd with Prickles or little Thorns. The Flower grows like the Leaves, close to the Root, without Stalk, five or six Inches broad, flat, and like a little *Bafon*, edg'd with some narrow-pointed Leaves. The Seeds come after the Flowers; they are long, and bear a white Down at the End. Chuse your Root new, well fed, and dry, of a sweet Taste, and aromattick Smell, and take care that no other Root be impos'd upon you instead of this, which is often done, especially when it is dear. It is one of the best Medicines against the Plague, and it is commonly receiv'd in the Catholick Countries that it was discover'd by an Angel to the Emperor *Charlemain*, for the Cure of his Soldiers, who were seiz'd with the Plague in their Camp; from which it took the Name of *Carline*, from *Carolus*.

The black Carline, or black *Chamæleon Thistle*, is like that we have describ'd; but that this rises to a Stalk, and the Leaves are of a more obscure Green. *Mathiolus* speaks of another Species, whose Flowers are Purple; but that is a Plant very scarce, and of no Use at all. The Virtues of the ordinary Carline are to resist Poison, provoke Sweat, to pass by Urine, and to open Obstructions; they are likewise serviceable in the Plague, Dropsy, Hypochondriack Passions, and the like. This Plant grows in the *Alps* and *Pyrenees*, and the Hills of *Auvergne*. Both the Kinds are so common, that the Peasants eat the Roots and Heads as Artichokes, when they are young and tender.

Carlina, in French *Carline*, or *Chamæleon*, is a Plant, whereof there are two Sorts: The first is called *Carlina*

acaules

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22



Carline Thistle.



Black Carline Thistle.

23



Great Valerian.



Small Valerian.

acaulos magno flore, the prickly *Carlina* with the large Flower: This bears from the Root large jagged Leaves, hanging to the Ground, &c. as before describ'd. When the Flower is past, there succeed oblong Seeds, each of which are furnish'd with a Quantity of white Hairs, which represent a Brush: These Seeds are separated from one another by Leaves folded into a Gutter. The Root shoots direct into the Ground, sometimes two Foot deep, the Thickness of an Inch, of a dark Colour without, white within, of a strong aromatick Smell, and agreeable Taste.

The second Sort of *Carlina Thistle* is the *Chamaeleon niger vulgaris*, the common black *Carlina*. This differs from the former, in that the Head is not so large, nor so much spread. It grows for the most Part only at the Top of the Stalk, which is rais'd among the Leaves about a Foot high. The Flower is commonly white, and very rarely red. The Root is not so big, or half so well fed as the white *Carlina*; and both of them grow in the hilly Countries, as aforesaid. They take the Roots out of the Earth in Spring-time, to dry for keeping, which are afterwards used in Physick. The first Kind is to be preferr'd for that Use, as being fuller of volatile and essential Parts.

[The first of these is the Root of the *Carlina seu Chamaeleon albus Dioscoridis*, Ger. 995. *Carlina humilis*, Park. 968. The other of the *Carlina caulescens flore magno albente*, Tourn. Inst. 500. *Carlina caulescens magno flore*, C. B. Pin. 380. The Root of the first is most commended for its Virtues; but the present Practice takes no Notice of either of them.]

23. Of the large Valerian.

THE great or large *Valerian*, which *Pomet.* *Johannes Bauhinus* calls *Valeriana major odorata Radice*, the great *Valerian* with the scented Root, is a Plant, the Roots of which are about an Inch thick, brown on the Outside, wrinkled in Rings deck'd with Fibres on the Sides, of a strong aromatick Smell, and very disagreeable; the Stalk is three Foot high, hollow, strait, and adorn'd at each Joint with two Leaves, opposite to each other; those which rise first from the Root are whole, the others cut on each Side. The Flowers are white, and scented like *Jasmine*; they grow in Clusters on the Tops of the Branches, and are small Pipes, divided into five Parts, which leave behind them flat long Seeds, charg'd with a white hairy Tuft.

The little *Valerian* has small Roots, of a good Smell: The Leaves which grow first are almost round and sharp at the End; the Stalk is a Foot and some Inches high, charged at each Joint with

two Leaves, cut in at the Side: Their Flowers are Purple, and resemble those of the great *Valerian*, but they are very small: Their Seed is the same. In Relation to the Choice of these two Roots, take the newest and best dry'd, and least charg'd with Fibres that is possible. They are both us'd as Counter-Poisons, against the Plague, for the Cure of the *Asthma*, *Dropsy*, &c. Some Authors call these Roots by the Name of *Poutick Phu*.

Valeriana, or *Valerian*, is a Plant, of which there are three Sorts us'd in Physick: The first is call'd *Valeriana horten-* *Lemery.* *fis*, or *Valeriana major odorata Radice*, by *Bauhinus* and *Ray*; by *Tournefort*, *Valeriana horten-* *Phu folio olusatris*. This bears the Stalk three Foot high, slender, round, hollow, and full of Branches, adorn'd from Joint to Joint with two Leave opposites to each other, as before in *Pomet*. The Flowers are white inclinable to Purple, and sweet scented. This Plant, which grows in our Gardens, is the best, and most to be valu'd of any of the *Valerians*.

The second Sort is call'd *Valeriana vulgaris*, or *Valeriana sylvestris major*, by *Tournefort*, the great wild *Valerian*; and by *Ray*, *Valeriana sylvestris magna aquatica*, the great watry wild *Valerian*. This bears the Stalks a Man's Height, strait, slender, and hollow like a Reed, a little hairy. The Leaves are like those of the foregoing Kind, but more divided, greener, indented on their Edges, a little hairy without: The Flowers are disposed as the great *Valerian*, of a whitish Colour, tending to Purple, which are succeeded by Seeds garnish'd with Plumes. The Root is fibrous, white, creeping, of an aromatick Taste and Smell. This Plant grows in wet and woody Grounds.

The third Sort is call'd *Valeriana sylvestris minor*, or *Valeriana minor pratensis sive aquatica*, the small, wild, or water *Valerian*. This bears a Stalk above a Foot high, angular, slender, branch'd, hollow, carrying the Leaves by two and two, jagged towards their Edges. The Flowers and Seed are like the former, but much less; the Roots slender, crawling, and white, having a great many Fibres, of an agreeable aromatick Taste. These are dry'd in the Sun, to be made fit for Use, and are cardiack, sudorifick, vulnerary, aperitive, proper to resist Poison, to fortify the Brain and Stomach, to destroy Worms, provoke the monthly Courses, assist Perspiration, and expel Wind.

[The first of these is the Root of the *Valeriana major horten-* *Mor. Umb. 52.* *Valeriana major odorata radice*, I. B. 3. 209. The second of the *Valeriana minor*, Ger. 916. *Valeriana sylvestris minor*, Park. 122. And the other, mention'd by *Lemery*, of the *Valeriana sylvestris magna Aquatica*, I. B. 3. 209. The first of these is an ingredient

Ingredient in the *Theriaca*, and other Compositions; the other two are little regarded.

But the *Valeriana sylvestris*, now so much and so deservedly in Esteem, is the Root of a Species different from all these, and is much more valuable than them all: The Plant which produces it is the *Valeriana sylvestris major foliis angustioribus*, Mor. Umb.]

24. Of Spignel.

MEUM or *Spignel*, which the *Pomet.* Antients furnam'd *Athamanticum*, from the Hill *Athamas* in *Thessaly*, where the best was said to grow, is a Root of the Thickness of a little Finger, black without, white within, long, and accompanied with a few small Roots, acrid, a little bitter, and of an aromatick Smell. The Leaves are like those of Fennel, but much less, more divided, and abundantly finer. The Stalks are a Foot high, charged with some Clusters of white Flowers, compos'd of five small Leaves; after each of which come two brown Seeds, like Fennel Seeds, but bigger and more furrow'd; which has made some believe that *Spignel* was a Species of Fennel or Dill, and so call it crooked Dill, or Fennel. This Root is very alexiterial, for which Reason it enters into the Composition of *Venice-Treacle*: It is likewise sudorifick and diuretick: The Dose of the Powder is a Dram. It is brought to us from the Mountains of *Auvergne*, *Burgundy*, the *Alps* and *Pyrenees*. Chuse such as is new, of a good Smell, and as little Worm-eaten and dusty as may be.

Meum Foliis Anethi, or the *Foeniculum Alpinum perenne capillaceo folio, odore medicato* of M. *Tournefort*, is a Plant which raises its Stalk a Foot high, hollow within, and full of Branches: The Leaves are like Fennel, but much less, more slash'd, and almost as fine as Hair: The Flowers grow in Bunches on the Tops of the Branches, like Dill; and when the Flowers are gone, a Swallow-tail'd furrow'd Seed succeeds. The Head of this Root is full of long Threads, like Eryngo. You ought to chuse the longest, roundest, well fed and entire, of a blackish Colour outwardly, and white within, the Smell aromatick, and the Taste sharp and a little bitter; it contains an exalted Oil, and a volatile or essential Salt.

[This is the Root of the *Meum vulgatius*, Park. 888. *Meum Foliis Anethi*, C. B. Pin. 148. It grows in Meadows and Pastures, and flowers in June. It is esteem'd an Alexipharmick, and has a Place in some Compositions, but otherwise is little used. There is another Species of it call'd

Mutellina in the Shops, which is the *Meum Alpinum umbella purpurascens*, C. B. Pin. 148. It is suppos'd to have the same Virtues with the former, but is now never used.]

25. Of Tormentil and Bistort.

THE *Tormentil* used in Physick, which C. *Baubinus* calls *Tormentilla sylvestris*, *Pomet.* Wild *Tormentil*, is a Plant, whereof the Root is lumpish, of an Inch thick, brown or reddish without, astringent and fibrous. The Leaves are like Cinquefoil, smooth, shining, six or seven at a Joint. The Stalks are low, short, branch'd, charg'd with several Flowers, of four yellow Leaves each; after which comes a Cluster of small Seeds.

The best *Tormentil* Roots come from grassy, wet Places about the *Alps* and *Pyrenees*. They use these in alexipharmick Compositions, as sudorifick. They are likewise used for the Bloody-Flux. Chuse the newest and best dry'd, from the hot Countries, which are better than what grow in our Gardens.

Bistort is a Plant that has a Root an Inch thick, crooked, and roll'd upon itself, with annular Foldings, brown without, and flesh-colour'd within, trimm'd with many hairy Fibres, and of an astringent Taste. The Leaves are like those of Wild Patience, of a lively green without, and a Sea-green on the Inside. This Plant is in Flower towards the End of *May*, adorn'd with several Leaves along the Stalk, smaller than those which rise first from the Root. The Flowers are of a Flesh Colour, crowded together in a Spike, but very short and very thick; after which comes a three-corner'd Seed. This Species is call'd by C. *Baubinus*, *Bistorta major radice minus intorta*, the larger *Bistort* with the less winding or crooked Root.

Tormentil is a Plant of two Kinds: The first is call'd *Tormentilla*, by Ray; *Lemery.* *Tormentilla sylvestris*, by *Tournefort*; *Heptaphyllum*, by *Fuchsius*, by reason it bears seven Leaves on a Stalk, as the Cinquefoil does five. The Flowers are compos'd each of four yellow Leaves, in Form of a Rose, supported by a Cup cut and divided into eight Parts, four larger and four smaller placed interchangeably. The Root is knotty and unequal, and delights to grow in Woods and shady Places, or others well supply'd with Moisture.

The second Sort is call'd *Tormentilla Alpina major*, or *Tormentilla Alpina vulgaris major*, by *Tournefort*, the common larger *Alpine Tormentil*: This differs from the former, in that the Leaves are larger, and the Root thicker, more plump, redder,

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25.

Plate 29.

24.



25.



26.



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26



Small
Birth-wort.



Clematite

Birth-wort.



Long

Birth-wort.

27



True Pellitory of Spain.



Pellitory of Spain.

redder, and fuller of Virtue. We have this brought to us ready dry'd from the *Alps*, &c. The Way to chuse it, is to take the newest, best fed, about an Inch thick, clean, of one Piece, free from the Strings, well dry'd, of a brown Colour, reddish within, and of an astringent Taste. It is binding, vulnerary, proper to stop Loosenesses of the Belly, Hemorrhages, Vomiting, Whites or Reds in Women, and to resist Infection: It is mix'd with cardiack and alexipharmick Medicines.

Bistort, as if you should say twice distorted, because the Root of this Plant is commonly turn'd and wound about itself: They give it the Name of *Bistort*, *Colubrina*, *Serpentaria*, and *Dracunculus*, by reason that this Root is twisted like a Serpent: 'Tis also call'd *Britannica*, from growing so frequently in *England*. There grow, towards the Bottom of the Flower of some *Bistorts*, several Knots or Excrescencies, which some Authors have call'd *Fungi Bistortæ*; but they are a Sort of little Roots, which produce each of them a Plant. It is cold, dry, astringent, and stops Fluxes of the Bowels, Vomiting, and Abortion, and dries up Catarrhs. It is given in Powder, Infusion, or Decoction in Wine and Water, and is good in a Gonorrhea, or Whites in Women.

[The *Tormentil* is the Root of the *Tormentilla vulgaris*, Park. 394. The *Tormentilla sylvestris*, C. B. Pin. 326. It is common in Woods, and flowers in *June*. 'Tis an Astringent and Alexipharmack; it is a good Addition to the White-Drink, which it changes to a fine red, and encreases very much its Virtue; it is also a good Ingredient in many other both officinal and extemporaneous Compositions.

The *Bistort* is the Root of the *Bistorta Radice minus intorta*, C. B. 192. *Bistorta major*, Ger. 322. It grows in many Places in *England*, in damp Meadows. It is a good Medicine in all Kinds of Fluxes and Hemorrhages, and is said also to be a good Alexipharmick.]

26. Of the *Aristolochias*, or Birthworts.

Pomet. THERE are three Sorts of Birthworts generally sold, viz. the long, the round, and the small: There is a fourth Sort, which is the *Aristolochia clematitis*, or *Saracens Birthwort*; but as we make no Use of that, we shall not say much about it.

The round *Birthwort* is a tubercous, fleshy Root, of different Sizes, to two or three Inches Diameter. They are uneven and irregular, that is to say, commonly much larger at the Bottom than at the Top. This Root is of an intolerable

Bitterness, yellow within, brown without, but not disagreeable in Smell, and furnish'd with some slender Fibres: Several Stalks arise from the upper Part, which spring above a Foot high, beset alternately with almost round Leaves, sticking to and embracing the Stalk at the Bottom, cut into two Ears, or Swallow-tail'd: The Flowers grow at the setting on of the Leaves; they are yellow streak'd Pipes of an Inch and a half long, hollow and flat like an Ox's Tongue, of a very deep red, which almost comes up to a Soot-Colour; they are without Smell. The Seeds are black, very small and flat, almost triangular, and are enclosed in a small membranous Fruit, green in the Beginning, brown when ripe, and divided lengthways into six Cells.

The *Long Birthwort* is a Root like the *Horse-Radish*, but a great deal thicker and longer, fleshy, brittle, brown without, yellow within, very bitter, and something fibrous: The Stalks are longer than those of the round, bending to the Ground, beset interchangeably, with Leaves not altogether so round as the former, and which are supported by a small Stem. The Flowers are nearly like those of the round, but the Fruit is of the Figure of a small Pear, which likewise contains in its Cells very flat, black Seeds.

The Roots of the *Birthwort*, which *J. Bauhinus* call'd *Aristolochia Polyrhizos*; and *C. Bauhinus*, *Aristolochia Piptolochia dicta*, are the least of all. They are composed of an infinite Number of small yellow Fibres, sticking to the same Head, hairy, very bitter, and of a good strong Smell. The Stalks are weak, slender, bending to the Ground, interchangeably deck'd with very small Leaves, which are paler than those of the others, in Form of a Heart revers'd, and supported by very slender Stalks, bearing also Flowers like the round Kind, but much less, yellowish, mix'd with a footy Colour. This is the *Birthwort* we sell for the small Sort.

The *Clematite*, or *Saracen Birthwort*, has fibrous Roots, very bitter, and of a Smell agreeable enough: The Stalks are two or three Feet high, strait, firm, and stronger than the former, furnish'd interchangeably with very large Leaves, of the Figure of a Heart, of a pale green Colour, hanging upon long Stalks. The Flowers stand at the joining on of the Leaves, after the same Manner as those of the other Kinds, but much less, and of a pale yellow. The Fruit, on the contrary, is larger, oval, and divided into six Cells, full of very fat Seed, which is triangular. *Bauhinus* calls this Species *Aristolochia Clematitis recta*.

All these Kinds grow in the Fields and Vineyards of *Provence* and *Languedoc*, except the

Small

Small Birthwort, which loves the Woods, the Olive-yards, the dry and rocky Hills of the same Countries ; it is also more aromatick and stronger. Messieurs *Rondelet* and *Charas*, with good Reason, prefer'd this *Birthwort* to the *Saracen* Kind, for *Venice-Treacle*. All the Sorts open Obstructions, and are purgative. They are used every Day with Success, in Decoctions, Injections, Lotions, deterfive and vulnerary Draughts, and the like.

The *Birthworts* ought to be chosen dry and well fed, especially the Round and the Long ; heavy, yellow within, grey and smooth without ; and the small one, which has little Use, except for the *Theriaca*, should be in fair Roots, something like those of Black Hellebore, well fed and new.

Aristolochia, or *Birthwort*, is a Plant, *Lemery*. of which there are four Sorts generally used in Physick : The first is call'd *Round Birthwort*, which is distinguish'd into two Sorts, one call'd *Aristolochia rotunda vera*, or *Aristolochia rotunda flore ex purpura nigro*, the *Birthwort* with the black purple Flower. It bears several Stalks, weak and pliant like the Vine Branch, about a Foot and a half high. The Root is tuberous, round, pretty thick, fleshy, fibrous, grey on the Outside, and yellow within, disagreeable to the Smell, and of a bitter Taste.

The second Kind of *Birthwort*, call'd round, is the *Aristolochia rotunda flore ex albo purpurascete*, the round *Birthwort* with the white purplish Flower. This differs from the other, in that the Stalks are more numerous, but shorter ; and the Leaves much larger, oblong, and hanging upon longer Stalks ; that the Flower is of a white Colour, inclining to purple, brown on the Inside ; and that the Fruit is longer, more like a Pear ; the Seed less, of a red Colour ; and the Bark of the Root yellow. This Plant grows among the Corn in the Fields.

The next Sort of *Birthwort*, call'd Long, is of two Kinds ; the first call'd *Aristolochia longa vera*, or *Aristolochia altera, radice pollicis crassitudine*, or the other Kind of *Birthwort*, with a Root the Bigness of one's Thumb. It bears several winding Stalks about a Foot and a half high, leaning to the Earth, carrying soft Leaves, less Swallow-tail'd than those of the round, terminating in a Point, and hanging upon their Stalks. The Flowers are like the Round ; the Fruit in Form of a small Pear, producing a flat Seed : The Root is near a Foot long, sometimes the Thickness of a Man's Wrist, and sometimes an Inch. The Colour, Smell and Taste, like the others. This grows in the Fields among Corn, in the Hedges and Vineyards.

The second King of *Long Birthwort* is call'd *Aristolochia longa altera*, or *Hispanica*, the other *Long* or *Spanish Birthwort*. This differs from the former only in that the Flower is not so purplish within, and the Root is much shorter. This grows plentifully in *Spain*, in the Kingdom of *Valencia*, and other warm Places among the Vines. Both the Round and Long contain a great deal of essential Salt, Oil, and Phlegm. They all resist Poison, Pestilence, and the Gangrene. Both Root and Leaf are useful in external Remedies.

The third Sort, or Species of *Birthwort*, is call'd the *Saracen Birthwort*, or *Clematite*, of which there are two Kinds : First, the *Aristolochia Clematidis recta* : This bears straight, firm Stalks, of two Feet high, where there interchangeably hang, upon long Stalks or Tails, Leaves of the Figure of Ivy, but of a pale green : The Flowers grow in great Numbers upon the Necks of the Leaves, like the former Kinds, but less, and of a pale yellow Colour : The Fruit, on the other Hand, is larger, fill'd with black flat Seed : The Root is little, fibrous, winding on all Sides, grey, of an agreeable Smell enough, bitter in Taste, and pungent. This Plant grows in the Fields, Woods, Hedges, or Lanes, in the hot Countries.

The second Sort is call'd *Aristolochia Clematidis Serpens*, or *Altera Hispanica* : It bears a small Vine-like Stem, of three or four Feet high, hollow, winding, and clinging to other Shrubs, or neighbouring Plants, like the *Hep* or *Bindweed* : The Leaves are large, pointed, green, and united above, and purple and white underneath, join'd by long Stalks : The Flower and Fruit are like the *Clematite* ; but the Flower is yellow, or of dark purple, lin'd within with a fine Wool. The Root is longish, and composed of many serpentine Fibres, of a pale Colour, acrid Taste, a little astringent, but not grateful. The whole Plant is sweet, and grows chiefly in *Spain*, in Bushes in the Olive-Grounds.

The fourth is call'd the *Small Birthwort*, of which there two Sorts ; the first, *Aristolochia tenuis*, or *Aristolochia Polyrhizos, sive Pistolochia Plinii*, it being the best to assist the Birth, or bring away the After-Birth, *Dioscorides* representing it to be the properest for that Purpose. This is the least of all the *Birthworts* : It produces several small Stalks, or Boughs, which spread themselves upon the Ground. The Leaves are form'd like the Ivy, but little and pale, fasten'd by slender Tails or Stalks. The Flowers are like those of the other Kinds, but a great deal smaller, sometimes black, sometimes of a yellowish green ; the Fruit like a small Pear :

The

The Roots are very fine, stringy, join'd together by a little Head, in Shape of a Beard, or Head of Hair.

The second Sort of this is call'd *Aristolochia*, or *Pistolochia altera*: It bears Vine-like Stalks of a Foot in Height, that have corner'd, hollow, pliant Branches, lying on the Ground, of a dark green Colour: The Leaves like the other Sort, but sharper at the Ends, ty'd to long Stalks: The Flower and Fruit like the *Long Birthwort*; but the Flower is not of such a brownish red, and the Fruit much less: The Roots are fine, with slender Fibres, sweet smelling, like the former Species, and grow in the hot Countries. All the Kinds of *Birthwort* are detesive and vulnerary, good to provoke Urine and Sweat, to attenuate the gross Humours, and assist Perspiration.

[The *Round Birthwort* is the Root of the *Aristolochia rotunda flore ex purpura nigro*, C. B. Pin. 307. The *Long*, of the *Aristolochia longa vera*, C. B. Pin. 307. The *Small*, of the *Aristolochia Pistolochia dicta*, C. B. Pin. 307. *Pistolochia vulgator*, Park. 293. and the *Clematite*, or *Saracens*, of the *Aristolochia Clematitis recta*, C. B. Pin. 307. *Aristolochia Saracenica*, Ger. Em. 847. These are all kept in the Gardens of the Curious here. They are all possess'd of much the same Virtues; but the Long has them in the greatest Degree. It is esteem'd a Cleanser of the Womb, a Forwarder of the Menfes and of Delivery: It is also accounted an Alexipharmick, and has therefore a Place in the *Theriaca*. Externally used it is detergent and suppurative.]

27. Of Pellitory of Spain.

Pomet. **P**ellitory of Spain is a Root of a moderate Length, the Thickness of a little Finger, greyish without, white within, furnish'd with some small Fibres, of an acrid burning Taste. It produces little green Leaves, and the Flowers of a Carnation Colour, like our Daïsies. Chuse such as is new, well fed, dry, difficult to break, and of a Taste and Colour as said before.

The *Pellitory* we have, is brought by *Marseilles* from *Tunis*, where it grows common: It is much in use for easing the Tooth-ach, being held in the Mouth; and is of several Uses in Physick. The Name of *Pyrethrum* is taken from its burning Quality; though some will have it come from *Pyrrhus*, King of *Epire*, who first discover'd its Use.

There is also another Sort of *Pellitory*, which the *French* call *Alexander's Foot*, and which is the tufted *Pellitory*: This is a little Root half a Foot

long, of a brownish grey without, and white within, something fibrous, at the Top of which grows a Sort of Tuft or Beard, like that of *Spignell*, of an acrid biting Taste, approaching to that of *Pellitory*, upon which Account it is call'd *Wild Pellitory*; and some use to fell it for true *Pellitory*, but it is easy to distinguish, this being smaller, longer, and carry'd about in Bundles. The Leaves of the Plant are very little, of a greenish yellow; and the Flowers, which grow in Umbells, are of a pale red. This is brought to us from *Holland*, and other Parts. Both this and the other ought to be chosen new, and in large Roots. They use this, as well as the other Kind, to make Vinegar in *France*; but this is of little Use in Physick.

Pyrethrum, in *English Pellitory*, or the Spitting Root, is brought dry'd to *Lemery*. us from foreign Countries; but we have two Sorts: The first, and the best, is in Pieces, about the Thickness of one's little Finger, round and wrinkled, of a greyish Colour without, and white within, deck'd with a few Fibres, of an acrid, burning Taste, and grows in the Kingdom of *Tunis*.

The Plant which bears this, is call'd *Pyrethrum Flore Bellidis*, the *Pellitory* with the Daisy Flower. Its Leaves are slash'd like those of the Fennel, but much less, and green, resembling those of the Carrot: They rise from small Stalks, which on their Tops support large radiant Flowers, of a Carnation Colour, like the Daisy: After them succeed small oblong Seeds.

The second Sort is a Root about half a Foot long, much slenderer than the former, of a brownish grey without, white within, furnish'd with Fibres. This Root has an acrid burning Taste, like the former, and is brought to us in Bundles from *Holland*. Some call it *Wild Pellitory*. The Plant which it bears is call'd *Pyrethrum Umbelliferum*, and by the *French*, *Alexander's Foot*. It grows a Foot high; the Leaves are small, cut fine as the other *Pellitory*, but of a yellowish green; the Flowers grow on the Tops, dispos'd in Clusters, of a pale red. Both the Sorts of *Pellitory* contain a great deal of acrid Salt and Oil, but the first is more powerful than the second. There is also a *Pseudo-pyrethrum*, which is call'd *Ptarmica*, or *Sneeze-wort*, which grows in Meadows, or untill'd Grounds. The Roots are chiefly kept in the Shops; being hot and dry, it is inciding, attenuating, and violently fudorifick; used chiefly against viscous Flegm in the Lungs, which it expels by Spitting and Urine: It is good against most Diseases of the Brain and Nerves; expels Wind, and prevails against Apoplexies, Lethargies, Vertigo's, Palsies, benumb'd Members,

Cholicks : It stimulates the Fibres, and is said to cure Quartan Agues. A Gargle of it cures the Thrush, and cold Rheum in the Teeth or Gums.

[The first *Pyrethrum* mention'd here, is the Root of the *Pyrethrum Flore Bellidis*, C. B. Pin. 148. *Pyrethrum Corymbiferum Flore Bellidis*, H. Ox. 3. 33. And the other of the *Pyrethrum Umbelliferum*, C. B. Pin. 148. *Pyrethrum Umbelliferum Matthioli*, J. B. 3. 20. It is a Dispute among Botanical Writers, which of these is the true *Pyrethrum*. *Dioscorides*'s Description agrees so well with the umbelliferous Kind, that many determine that to be the true ; and those who are of Opinion that the Daisy-flower'd one, is the true, reconcile it to *Dioscorides*'s Description by the Alteration of a Word in the *Greek*, which they say has been an Error of the Press, and that the Word *ορθου* is the true Reading, instead of *αρθου*. Their Virtues are much alike, but the first is the stronger.

28. Of White and Red Behen, or Ben.

Pomet. **T**HE *White Ben* is a Root like the Pellitory, grey without, and something whiter within ; the Taste almost insipid, but being held long in the Mouth, it leaves a Bitterness disagreeable enough. This Root is brought to us from the same Places that the *Red Ben* is ; and the Leaves are much the same, except that this has, at the Bottom of each Leaf, four small ones of the same Form and Colour, that grow opposite to each other ; in the Middle of which rises a high Stalk, adorn'd with some few Leaves, and a Budding of Scales, which, when blown, produces a little yellow Flower. Chuse your Root plump, not rotten, or easy to break, but the freshest you can possibly get. It is appropriated to the same Intentions with the *Red Ben*.

The *Red Ben* is a Root brought to us cut in Pieces like Jalap, from *Mount Libanus*, and other Places of *Syria*, which, in the Ground, is of the Shape of a Wild Parsnip, deck'd with Fibres, of a brown Colour outwardly, and red within ; from whence arise green long Leaves, like those of the *Limonium* or Sea Lavender ; for which Reason some will have it to be a Species of that Plant ; from the Midst of which grow Stalks adorn'd with red Flowers, which are rang'd two and two together, of the Shape of *Jamaica-Pepper*. Chuse such as is dry, of a high Colour, astringent, aromack, and new as it can be. It is not much used in Medicine, and those who should use it, generally substitute the Roots of Angelica,

Zedoary, Borrage, or Buglos, in its Place. It is reckon'd cordial, and a Resister of Poison.

[There has been much Dispute about what were the *Behen Album* and *Rubrum* of the Antients : The *Album* has been by some judg'd to be the *Lychnis Sylvestris quæ Behen Album vulgo*, C. B. Pin. 205. by others the *Serratulæ affinis Capituli squamoso luteo ut et flore*, C. B. Pin. 235. and by others, the *Facea orientalis patula, Carthami facie flore luteo magno*, Tourn. Cor. 32. The second of these is the Plant describ'd by *Pomet*, but the last in all Probability is the true *Behen Album* of the *Arabians*. The *Behen Rubrum* is in all Appearance the Root of a Species of the *Limonium*, and the Root of the common *Limonium* is generally order'd in its Place ; neither of them, however, are now much used in Medicine.]

29. Of Alkanet.

ALKANET is a Root of a moderate Size and Length, of a deep red Colour on the Outside, and white within, which produces green rough Leaves, like the *Buglos* : For which Reason some call it *Wild Buglos* : In the Middle of which arises a straight Stalk, adorn'd with little Leaves and Flowers, in Form of a Star, of a faint pale Blue. Chuse your *Alkanet* new, pliant, but yet of a deep red without, white within, with little blue Heads, and which, being rubb'd a little, wet or dry, upon the Nail, or on the Hand, makes a beautiful Vermillion.

As the Colour of the said Root lies in the Superficies, those who use it for colouring of their Wax, Ointments or Oils, prefer the Small to the Gross ; and if it is clean, it produces a very fine red. The *Alkanet* grows in *Provence*, from whence it is brought to us by the Way of *Marseilles*, and *Nismes* in *Languedoc*. This Root is very useful in Physick, as well as for the Purposes aforesaid : It is astringent and deterfive, stays Loosenesses, and is used for cleansing and drying old Ulcers.

There is another *Alkanet* of the *Levant*, or *Constantinople*, which is a Root of a surprizing Nature, as well from its Size and Thickness, as it grows sometimes larger than the Arm, as for its Figure, for it looks to be nothing but a Mass of large long Leaves, twisted like a Roll of Tobacco ; and of a great Variety of Colours, the first being an obscure Red, which is succeeded by a very fine Violet Colour ; at the Top of which is a Kind of Mouldiness, which is white and blueish, and, as it were, its Flower. In the Middle of the said Root is found a Heart, which is a little Bark, thin and long, like Cinnamon,

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of a very fine red without, and white within. This *Alkanet* is very little in Use, but yet gives a better Colour than the common.

Anchusa puniceis floribus, or *Bugloss-Lemery*. *sum radice rubra*, sive *Anchusa vulgarior*, by *Tournefort*; in *French*, *Orcanette*, is a Species of *Buglos*, a Plant which bears several Stalks above a Foot high, bending to the Ground. The Leaves are like those of the *Wild Buglos*. The Flowers grow on the Top of the Branches; and, when they fall, are succeeded by Cups, which contain Seeds shaped like a Viper's Head, of an Ash-Colour: The Root is an Inch thick; the Bark red, and whitish towards the Heart. This Plant grows in sandy Places in *Languedoc* and *Provence*. The Root is dried in the Sun, to be fit for the Druggist's Use. It makes a good Dye for Pomatums, and the like; and yields a great deal of Oil, with a little Salt: It is astringent, stops Fluxes of the Belly, being made into a Decoction. They use it outwardly for detèrgering, and drying up of old Ulcers.

We have brought to us oftentimes from the *Levant*, a Kind of *Orcanette*, call'd *Orcanette of Constantinople*: This is a Sort of Root as thick and large as a Man's Arm, but of a particular Shape; for it produces a Mass of large Leaves twisted like a Tobacco-Roll: In Appearance the whole looks as if it was artificial.

[The *Alkanet* of the Shops is the Root of the *Anchusa puniceis floribus*. C. B. Pin. 255. *Anchusa minor purpurea*. Park. 517. It is not much used in Medicine. Some to prevent the Loading the *Lucatellus's* Balsam with the Powder of *Sanders wood*, give it its red Colour by first boiling this Root in the Oil, as others do, according to the *Edinburgh Dispensatory*, with the *Sanguis Draconis*.

There is also another Species of *Alkanet*, the *Anchusa lutea* of the Shops, which is the Root of the *Sympligtum Echii folio ampliori flore luteo*. Tourn. Inst. 138. But it is less used than the other. The *Levant Alkanet* is artificial.]

30. Of Madder.

Pomet. THE *Madder*, which is call'd *Rubia tinctorum*, is the Root of a Plant well known. 'Tis of this Root the *Dutch* make such great Advantages, by the Quantity of it they sell in different Countries, and particularly in *France*.

The *Madder* comes to us in three sorts. The first Sort is brought in the Root just as it comes out of the Ground, without any other Preparation than that of being dry'd. The second Sort is the Root *Madder*, freed from the Bark and the

Heart, and ground by a Mill into a gross Powder, as we buy it. The third Sort is the Root *Madder* in the gross, ground to Powder. But the second Kind is the best; which to have all its Perfection ought to be, when new taken out of the Bale, of a pale red, and to grow to a very fine red in keeping. That of *Zeland* is esteem'd the best. It is used by the Dyers, and in Physick. It is hot, desiccative and vulnerary, good in Obstructions of the Liver and Spleen, in the Jaundice, and Suppressions of Urine.

Madder is a Plant whereof there are two Sorts; one call'd *Rubia tinctorum Lemery*. *sativa*, according to *Tournefort*; sive *hortensis*, according to *Parkinson*, that is, the Garden or cultivated *Madder*. The other is *Rubia sylvestris* or *Erratica*. The first Kind bears long four-squar'd Stalks, knotty and rough, from whence shoot out at every Joint five or six oblong narrow Leaves, which surround the Stalk in the Shape of a Star or Wheel. The Flowers grow on the Tops of the Branches, fasten'd by little Stems: They are in small Cups cut into five or six Parts, disposed like a Star, of a yellow greenish Colour; and when the Flower is gone, the Cup brings forth a Fruit of two black Fruits, ty'd together full of Juice; each of which contains a Seed almost round, enclosed in a Membrane or Pellicle. The Roots are numerous, long, and divided into several Branches; about the Thickness of a Goose-Quill, red throughout, woody, and of an astringent Taste. They cultivate this Plant in rich Ground, in many Parts of *Europe*, and gather the Root in *May* and *June*, to dry it for keeping and Transportation.

The second Sort, call'd *Rubia Erratica*, or *Wild Madder*, is much less, and rougher than the former: The Flowers are small and yellow: It bears the Fruit in Summer and Autumn, which lasts the same in Winter. It grows in the Hedges about *Montpellier*; the Root is only used in Physick, especially that of the Garden Kind: It contains a good deal of essential Salt and Oil. Both the Sorts are aperitive by Urine, and a little astringent for the Belly: They provoke the Terms, open Obstructions, and are used successfully in the *Jaundice*, and may be given in Powder, Tincture, or Decoction, to the Purposes aforesaid.

[This is the Root of the *Rubia Tinctorum sativa*. C. B. Pin. 333. *Rubia major sativa sive hortensis* 274. It is cultivated in Gardens and Fields, and flowers in *June*. The Root is of a sweetish Taste, mix'd with some Bitterness. It is commonly used in Decoctions, Diet Drinks, and medicated Ales for Obstructions of the *Fiscera*.]

31. Of Salsaparilla

Pomet. **S**alsaparilla is the long Filaments, or fibrous Parts of a Root, the Plant whereof runs upon Walls, Hedges, Trees, &c. with long, strait, pointed Leaves, of a deep green Colour, fill'd with Fibres: At the Bottom of the Leaves grow little Filaments, which catch hold of Trees, as the Vine does: On the Tops of the Branches arise little white Flowers like Stars, from whence comes a small red Fruit, of a sharpish Taste. This Plant grows plentifully in *New Spain*, and in *Peru*, and in the *East-Indies* as well as the *West*, and delights in wet and marshy Grounds.

Some will needs have it, that this *Salsaparilla*, is a Plant which is very common in *France*, and call'd *Smilax aspera major*, the large prickly Bindweed, or *Smilax*. There are two Sorts of *Salsaparilla* sold, viz. the *Indian Salsaparilla* of *Spain*, and the bigger *Salsaparilla* of *Marignan*, or *Maraban*. The finest and best of the two, is that of *Spain*, which to be in its Perfection ought to be in long stringy Roots, the Thickness of a Goose-Quill, greyish without, and white with two reddish Streaks within, easy to split in two, and when it is split free from Dust or Wormholes, and such as being boil'd, tinges the Water of a reddish Colour. Reject such as is moist, extremely small, full of Fibres; and likewise a Sort of *Salsaparilla*, from *Holland*, in little Bunches, cut at both Ends. Some will have it that the *Salsaparilla*, reddish on the Outside, and ty'd up in long Bunches, which comes by the Way of *Marseilles*, is not so good as the other; but, for my Part, I can affirm, I never could find any Difference betwixt that and the true *Spanish Salsaparilla*: The large *Bastard Salsaparilla*, or that of *Marignan*, ought absolutely to be rejected; this some call falsely *Muscovy Salsaparilla*, but it is fitter for lighting of Fires than to be used in Physick. The Use of this Root is for *Ptisans*, or Diet-drinks, for curing the *Venerical Disease*, and making such lean as are too fat. The Dose in Decoction is from half an Ounce to an Ounce.

Sarsaparilla, or *Salsaparilla*, is a *Lemery.* very long Root, like a small Cord, which is brought from *New Spain* in Collars, or long Bundles of fibrous Branches, the Thickness of a writing Quill. This is the *Smilax*, or *Bindweed*, call'd *Smilax Aspera Peruana*, five *Salsaparilla*. The Stalk is long, serpentine, woody, prickly, yielding, and climbing like the Vine upon every Shrub or Tree. The Flowers, which are of a white Colour, at last produce

Berries, which are round and fleshy like small Cherries, green at first, a little reddish afterwards, and at last black, which contain in them one or two stony Nuts, of a whitish yellow, in which is a Seed, or white hard Kernel. The best *Salsaparilla*, is that which is round, full, apt to break when beat together, mealy, and white within; that which is shrivell'd, lean, tough, and not mealy, being nothing near so good. There is some which comes from *Jamaica*, but that is tough, not mealy, and so not of equal Value with the *Spanish*. Our Merchants bring another Sort, which they call *Marignan Salsaparilla*, which is larger and groffer than that of *Peru*, and nothing nigh so good. It is call'd *Salsaparilla*, which is as much as to say, in the *Indian Tongue*, a Plant made up of the *Vine* and *Bramble*. This Root is fudorifick, alexipharmick, and a great Alcali. Its chief Use is against the *French Pox* and its Symptoms, the King's-Evil, Rheumatisms, Catarrhs, Gouts, and all Diseases proceeding from them, taken in a Powder from a Dram to two Drams.

[It is the Root of the *Smilax aspera Peruviana* five *Sarsaparilla*. C. B. Pin. 296. *Smilax Peruviana Salsaparilla*. Ger. 709. It was formerly used in *America* for Venerical Diseases, and from thence grew in Use here in the same Intentions, tho' its Virtues are at present very much suspected; it is but in a few of the Official Compositions, but pretty much in extemporaneous Prescription, and constantly taken by many People as a Kind of Tea.]

32. Of China Root.

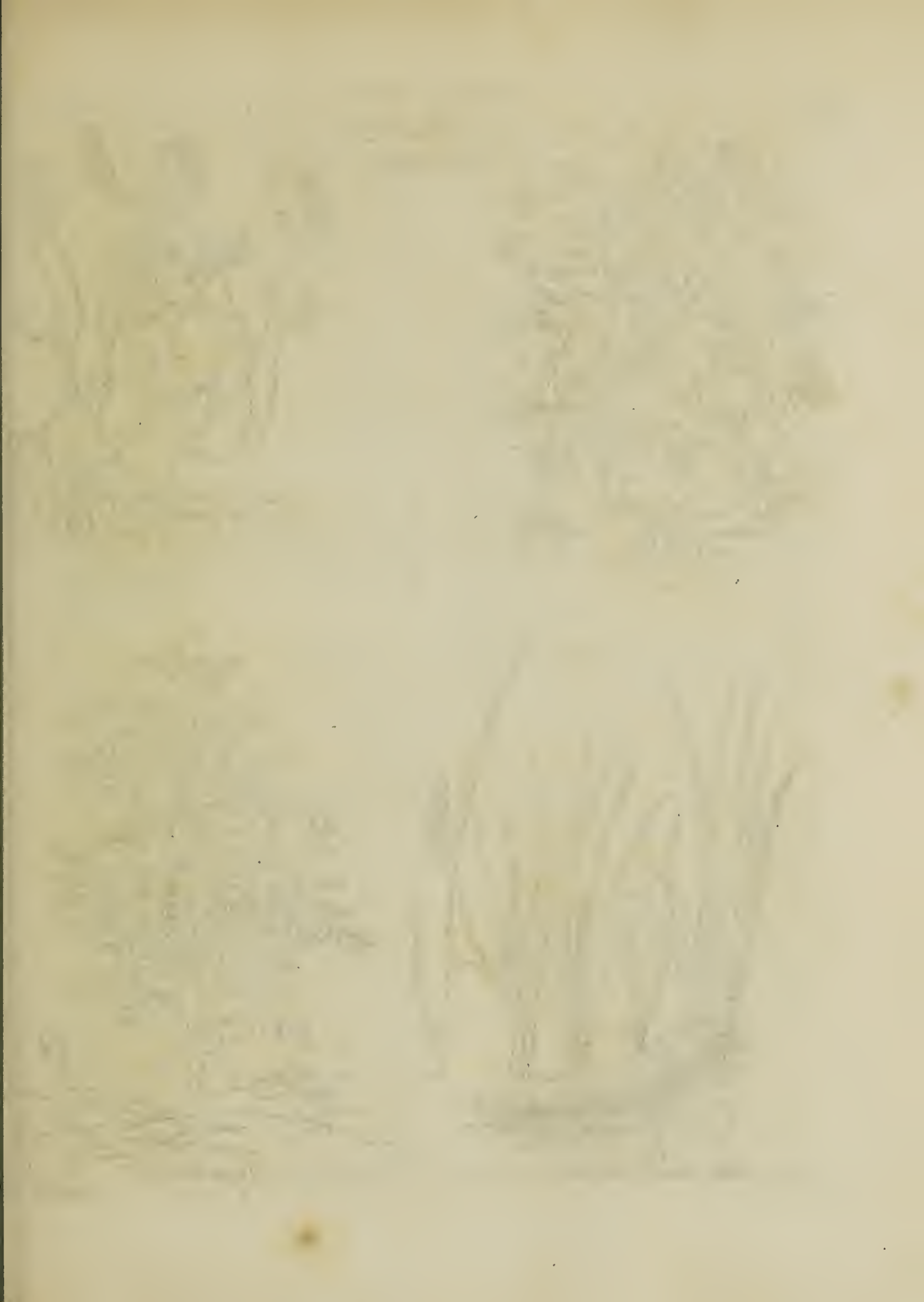
THE *China* is a knotty crumpled Root, reddish without and within; *Pomet.* which, from the Ground, sends forth Stalks that climb upon other Plants, from whence grow large green Leaves, in the Shape of a Heart; the Stalk is furnish'd all along with little Prickles like Thorns.

The *China* which we sell, is brought to us from several Parts of the *East-Indies* and *China*, both by the Way of *Holland*, *England*, and *Marseilles*, sometimes just as it is taken out of the Ground, but oftener cleansed in Part from its outer Skin, and with its Ends cut off, to make it sell the better.

Chuse such as is heavy, resinous, difficult to cut, cleansed of its outer Skin, of a reddish Colour, and take Care that it has not been Worm-eaten, and the Holes stop'd with Bole, or such other Matter, as is very frequently the Case. The *China* is much in Use to make fudorifick *Ptisans*, and

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Asarabacca



Asarabacca

35.



The true Acorus

34.



Liquorice

and is employ'd to that Purpose with *Salsaparilla*, one being seldom used without the other.

There grows in the Islands of the *Antilles*, a large Root, which some affirm to be the true *China*; but as that is not yet confirm'd, I shall refer the Reader to a Book of the Reverend Father *du Tertre*, who has made a fine and large Description thereof; but as that Account has no Relation to our Business, I do not think it proper to say more of it.

[There are two Kinds of *China Root* sold in the Shops; the true Kind is the Root of the *China Orientalis seu Smilax aspera Chinenfis Lampatam dicta* in MSS. Herman. *Sankira Smilax minus Spinosa fructu rubicundo, radice Virtuosa China Dicta*. Kœmp. Amœn Exot. 781. This is brought to us from *China*. The other is the *China Spuria Nodosa*. C. B. Pin. 297. The *Pseudo China Park*. 1579. It is the Root of the *Kaboloſſa Riribumawel Smilax Indica Spinosa folio Cinnamomi, Pseudo China quibusdam*. Mus. Zeyl. 22. This is brought to us from the *West-Indies*. It differs but little from the other, and in all Probability is the Root of the same Plant brought into a different Climate. It was once in great Esteem in the Venereal Disease, but has now lost much of its Credit.]

33. Of *Afarum*, or *Affarabacca*.

THIS Root commonly call'd *Affarabacca Cabaret*, or *Wild Spiknard*, grows very frequently in most Parts of the *Levant*, in *Canada*, and likewise in *France* all about *Lyons*. This Root, when in the Earth, sends forth Stalks, on the Tops of which grow green thick Leaves, like a Heart, the Flower is rose-fashion'd, and of a reddish Colour.

Chuse the true *Afarum* from the *Levant*, if you can possibly get it, and such Roots as are the most beautiful, not fibrous or broken, but of a grey Colour on the Outside and Within, of a penetrating quick Smell, and of an acrid Taste, attended with a little Bitterness. Take care that you do not take the *Azarina*, or small *Spiknard* for it, which is brought to us from *Burgundy*, and may be easily distinguish'd, in that the *Afarum* has grey Roots of the Thickness of a writing-Pen, and the *Azarina* is in little blackish Roots, dry and full of Filaments.

It is observable that this Plant has its Root lying upon, and hardly at all entering into the Earth, but at a Foot Depth under some of the Roots there are knobby Substances, like Truffles in Shape, yellowish without, and white within, which when squeez'd emit a milky Juice, which

is caustick like Fire. This I mention here, not knowing that any other Person has observ'd, or written about it.

The *Afarum* is but little used in Medicine. It is an Emetick infused in the Quantity of two Drams, or something more, in half a Pint of White Wine, or given in Powder. It is a Diuretick also, boil'd in Water, and has a Place in some Galenical Compositions.

Azarum, or *Afarum*, wild *Spiknard*, is a small Plant which bears its Leaves like those of the Ground-Ivy, but smaller, rounder, tenderer, smooth, and of a shining green, fasten'd upon long Stalks. The Flowers grow near the Root, supported upon short Stems, which arise at the bottom of the Stalks of the Leaves: Each of the Flowers has five or six purple Supporters, which raise up the Hollow of the Cup, that is divided commonly into three Parts. When the Flower is gone, a Fruit follows in the Cup, which is cut into six Parts, and divided each lengthway into six Lodgings, which contain in them little, longish brown Seeds, full of a white Substance, whose Taste is something acrid. The Roots are close by the Ground, small corner'd, creeping, knotty, crooked, and stringy. This Plant grows upon the Mountains, and in the Gardens or shady Places; and the Leaves continue green all the Year. It purges upwards and downwards; is aperitive, and opens Obstructions. The Dose is from half a Dram to two in Infusion, and from half a Scruple to a Dram in Powder. It is likewise used in several Compositions, where it does not vomit at all, because it is mix'd but in small Quantities, with abundance of other Ingredients. [It is the Root of the *Afarum Vulgare*. Park. 266. *Afarum vulgare Rotundifolium*. Hist. Ox. 3. 511. It is kept in Gardens and Flowers early in the Spring. Much has been said in its Praise in many Intentions, but it is now seldom given inwardly; its principal Use is in a sort of Snuff made of the dry'd Leaves reduced to Powder, which powerfully drains mucous Humours from the Head.

The other Species is the *Afarum Virginianum seu Serpentaria nigra*, the *Afarum Virginianum folio cordato Cyclaminis more Maculato*. H. Ox. 3. 511. The Roots of this are sometimes offer'd to sell for the true Snake Root.]

34. Of *Liquorice*.

L*Iquerice*, which the *Latins* have call'd *Glychyrriza*, *Liquiritia*, *Radix dulcis*, is a Plant which has clammy Leaves, green, shining, and roundish; the Flowers are of a pur-

a purple Colour, from whence come the Husks, wherein the Seed is contain'd.

The *Liquorice* sold at *Paris*, is brought thither by Bales, from several Parts of *Spain*, but chiefly from *Bayonne* and *Saragossa* Side of the Country, where that Plant grows in abundance. Chuse your *Liquorice* fresh, smooth, of about two Fingers thick, reddish without, of a Gold-Colour within, easy to cut, and of a sweet agreeable Taste. That of *Saragossa* is the best, and is to be preferr'd to that of *Bayonne*, which is greyish without, less, earthy, and of little Esteem. It must be carefully preserv'd lest it spoil, for when one Piece of it begins to taint, the whole Parcel is in Danger. As to dry *Liquorice*, chuse such as is yellow and dry, and take Care that it is not the Refuse of the Bales, which is commonly black, spoil'd, and of no Value. The Use of *Liquorice* is too well known for me to need to describe it. I shall however observe that *Liquorice Powder* taken with an equal Quantity of Flower of Brimstone, from two Ounces to four, according to the Size of the Horse, twice a Day for eight Days, is a good Remedy to prevent broken Windedness when it is first perceived, and will prevent the Malady from appearing for some Days, which those who buy Horses ought to be upon their Guard about.

During the Use of this Remedy, the Horse must be kept at Rest, and have as little Hay as possible.

Of Black Liquorice Juice.

They make of *Liquorice* and warm Water, a strong yellow Tincture, which afterwards is evaporated over the Fire, to a solid Consistence, till it becomes black, and is what we call black *Liquorish* Juice, which comes to us ready made from *Holland*, *Spain*, and *Marscilles*, in Cakes of different Sizes, which sometimes weigh four Ounces, or half a Pound. The *Liquorish* Juice which has the most Virtue, is black without, and of a shining Blackness within, easy to break, and of a grateful Taste enough; reject such as is soft, reddish, and, when broke, is dirty or gravelly, and has a burnt Taste. The Juice is very useful to cure those who are afflicted with Fluxes of Rheum, Coughs, Asthma's, &c. chewing it in the Mouth like *Tobacco*, or dissolving it in any convenient Liquor. We sell besides, other Kinds of *Liquorish* Juices, as those of *Blais*, both white and yellow, and those of *Rheims* or of *Paris*, which are cut into flat Pastiles, or made round like a small Wax-Candle. The white Juice of *Liquorish*, as 'tis call'd, made at *Paris*, is a Composition of *Liquorish* Powder, Sugar, Al-

monds, and *Orrice* Powder; but as there are various Methods of making up these Kinds of Lozenges, either with Gums, Sugars, or Variety of Drugs, I shall pass them by, and only say, that I think the black Juice, singly, to have more Virtue than any of the Compositions.

There are several other Roots sold in the Shops, besides what I have mention'd, which grow in the Gardens, and other Places about *Paris*, as the *Enula Campana*; the *Paeony*, male and female; the greater and lesser *Arum*, or *Wake Robin*; the *Dog-grass*, or *Quick-grass*; and several others, which the Herb-sellers furnish us with, as we have Occasion.

Glycyrrhiza vulgaris, or, according to *Tournefort*, the *Glycyrrhiza filiquosa*, *Lemery. vel Germanica*, is a Plant which bears several Stalks three or four Foot high: The Leaves are longish, viscous, green, shining, disposed into Wings like the *Acacia*, ranged in Pairs along the Side, terminating in a single Leaf, of a smart Taste, tending to an acrid. The Flowers are of the leguminous Kind, and purple-colour'd, succeeded by short Husks, which enclose Seeds that are ordinarily of the Shape of a little Kidney. The Roots are large and long, dividing themselves into several Branches, some as thick as one's Thumb, and others as the Finger.

There is another Sort of *Liquorish* which is call'd, *Glycyrrhiza Echinata*, or *Glycyrrhiza capite Echinato*, the prickly *Liquorish*, or that with the *Chestnut Head*: It bears its Branches a Man's Height, carrying long Leaves, sharp at the Ends, and made like the *Mastick Tree*, green, a little glutinous, and disposed as the former Species. The Flowers are small, bluish; after which grows Fruit composed of several Husks, which are longish and bristled at the Points, standing one against another, and join'd together almost at the Bottom. The Roots are long, and as thick as an Arm, growing straight in the Ground, without any Division at all. This grows chiefly in *Italy*, and is of no Kind of Use, because the other Sort is so much the better both in Taste and Virtue.

Liquorish is brought to us out of *Spain*, and many other Countries of *Europe*, but the best is that which grows in *England*. The best is large, thick, substantial, and of a good Length, being of a brightish yellow within. The *Spanish* is much like the *English*, save that it dries faster, and is more wrinkled in its Bark. That which comes from *Brandenburgh* is a good Kind, and being dried will keep good two Years. It is one of the best Pectorals in the World, opens Obstructions of the Breast and Lungs; easeth griping of the Bowels and Cholick, and is good to mix
with

with Catharticks. It cures Ulcers of Kidneys and Bladder, allays Sharpness of Urine, and pissing of Blood; is singularly useful against Coughs, Colds, Asthma's, Wheezing, Difficulty of Breathing, and other Diseases of these Parts.

[This is the Root of the *Glycyrrhiza siliquosa* vel *Germanica*. C. B. Pin. 352. *Glycyrrhiza vulgaris*. Ger. Em. 1302. It is cultivated in Fields and Gardens, and flowers in June; its chief Place of Growth with us is about *Pontefract* in *Yorkshire*, tho' of late there is a great deal cultivated near *London*. We have two Sorts of the Liquorice Juice in the Shops, the one call'd *Spanish*, which is made near *Tortosa* in *Catalonia*; the other is made here of the stringy Parts of the Root, and mix'd with the Pulp of Prunes; but they are easily distinguish'd, as that from abroad is of a much finer Colour and Consistence, and harder and more brittle.]

35. Of Hermodactyls.

Pomet. THE *Hermodactyls* are small bulbous Roots, of the Shape of a Heart, generally of the Bigness of a middling Nut, but flat; of a reddish Grey without, and White within; heavy and compact, and almost of an insipid Taste, while they are fresh; but light, and subject to be worm-eaten when old: They are brought dry'd from *Egypt* and *Syria*.

The Plant has Leaves like the Leek, of a fine Green; among which rises a Stalk, which carries on its Top a small pear-fashion'd Fruit. Chuse such as are fresh, large, well-fed, reddish without, and white within, the driest and least full of Dust that can be got. It is a Commodity of which it is best to lay in no great Store, it being so ready to decay, or worm-eat, as I mention'd before. They are much us'd in Physick, in several *Galenic* Compositions.

The *Hermodactyl* is a tuberous or *Lemery*. bulbous Root, as thick as a little Walnut, being of the Shape of a Heart, red without, and white within, of a spongy light Substance, without Fibres, easy to break, and crumble into Powder like Meal, of a sweetish Taste, a little glutinous. It is brought dry from *Egypt* and *Syria*. The common Opinion is, that it is a sort of *Colchicum*, call'd by *Casp. Baubinus*, *Colchicum radice siccata alba*; and by *Lobel*, the *Hermodactyl* of the Shops that is not poisonous,

There are others that believe it is a kind of tuberous Orrice, called by *Casp. Baubinus*, *Iris tuberosa folio anguloso*, the tuberous Orrice with the corner'd Leaf, and by *Mantholus*, *Hermodactylus verus*: So that we ought to suspend our Judgment

on this Affair, and wait 'till it is decided by more Travellers that can give a better Light into this Business, and sufficiently clear up our Doubts. It is a singular Purge, expelling tough Flegm, and clammy Humours, from the Joints and extreme Parts of the Body; and is accounted a Specifick against the Gout in the Hands and Feet, given in Powder, from half a Dram to a Dram; and in Infusion, from two Drams to half an Ounce. The *Hermodactyl* Pills are good against Palsies, Tremblings, Convulsions, Colicks, Gouts, &c. being given from two Scruples to four.

[It is very much disputed yet, among the best Authors, what the *Hermodactyls* are the Root of; the most probable Conjecture is, that the Plant which produces them, is the *Colchicum Chionense floribus Fritillariæ Instar tessulatis foliis undulatis*. Hist. Ox. 341. *Colchicum variegatum Meliagris Facie*. Cornut.

They were commonly us'd as a Purge among the Antients; but their Action is very slow, tedious, and fatiguing; they are best corrected with Aromaticks, and are now sometimes mix'd with Jalap, and given in Rheumatisms, and are an Ingredient in the *Electuariûm Caryocostinum* of the Shops.

The Women of *Egypt* eat them roasted to make them fat.]

36. Of the true Acorus.

Pomet. THE true *Acorus*, which is improperly call'd *Calamus Aromaticus*, is a knotty Root, reddish without, and white within, adorn'd with long Filaments, or fibrous Strings, of a light Substance, and easily subject to be worm-eaten. There arise from the said Root green Leaves, long and narrow; the Fruit is about three Inches long, of the Size and Shape of long Pepper.

Chuse your *Acorus* new, well-fed, clean'd from the Fibres, hard to break, of an acrid Taste, accompanied with an agreeable Bitterness, of a sweet Smell, and very Aromatick; 'tis for this Reason it is more known by the Name of *Calamus Aromaticus*, though altogether improper, than that of the *Acorus*. This Root, which is commonly of the Thickness of a little Finger, and about half a Foot long; is brought to us from several Parts of *Poland*, and of *Tartary*, and likewise from the Isle of *Java*, where it is call'd *Diringo*. The *Acorus* is of Use in Physick; it is warm, diuretick, stomachick, cordial, and a Restiter of Poison, and is one of the Ingredients of the Treacle, without any other Preparation but being well pick'd and clean'd, and freed from Dirt, or any thing else that may stick to the Root;

Root ; but its principal Use is for the Persuiners. There is another Sort of *Acorus*, call'd the false *Acorus*, and in *Latin*, *Acorus adulterinus*, which is a Species of Flag-flower, with yellow Flowers, common in watry Places : It is attenuant, resolvent, strengthening, and proper to stay Fluxes of the Belly and Hemorrhages, but is little us'd.

The true *Acorus*, or *Calamus Aromaticus* of the Shops, is a Root the Length of one's Hand, a Finger's Thickness, full of little Knots and Strings, of a fine light Substance, reddish without, and white within, scented, acrid, and commonly call'd, but falsely, *Calamus Aromaticus*. It is brought from *Lithuania*, *Tartary*, &c. The Leaves of the Root are long, almost like the *Orrice*. There is false *Acorus*, which is called, in *Latin*, *Acorus adulterinus*, *seu gladiolus luteus* ; which is a Species of the Flag Flower : These grow in marshy and other watry Places. Sometimes this Root is used in Physick, but rarely. Both Sorts contain in them a good deal of exalted Oil, mix'd with volatile Salt. The true Sort is bitter, and of a sharp Taste, stomachick, heating and drying, of thin and subtil Parts, attenuating, inciding, and aperitive ; it opens Obstructions of the Liver, Spleen, and Womb, relieves in the Cholick, and provokes the Terms. It may be given in Powder, the candied Root, Oil or Extract, from a Scruple to half a Dram ; or in the *Electuary Diacorum*, which you may see in the *London Dispensatory*.

[This is the Root of the *Acorus verus* *five Calamus aromaticus Officinaram*, C. B. Pin. 34. *Acorus verus Officinis falso Calamus*, Ger. Emac. 62. It grows in wet Places, and produces its Spike in July.

The best Judges in Botany are agreed, that this is not the true *Calamus aromaticus* of the Antients, but the *Acorus verus* of *Dioscorides*.]

37. Of the true aromattick Reed, or Calamus Aromaticus.

THE true *Calamus*, or rather the *Pomet*. bitter *Calamus*, is a Reed the Thickness of a Quill, of two or three Foot high, compos'd of Joints, from whence grow green Leaves, and little Clusters of yellow Flowers. This little Reed grows in several Parts of the *Levant*, from whence it is convey'd to *Marseilles*, sometimes whole, but generally in small Bundles of about half a Foot long. Chuse the largest which is fresh, cleans'd from the small Roots and the Branches, and made up in Bundles ; it ought to be of a brownish Red without, and whitish within, furnish'd with a white Pith ; for

when it is stale the said Pith will turn yellow, and fall into a Dust, as if Worms had eaten it : It ought also to break into Splinters, and, when you put it into your Mouth, to have an intolerable Bitterness. It is chiefly us'd for *Venice Treacle*.

Calamus verus, seu amarus, the true or bitter *Calamus*, is a kind of Reed *Lemery*. which we bring dry from the *East-Indies* in little Bales. It grows about three Foot high ; the Stalk is reddish without, and full of a white Pith within ; it is divided by Joints, on each of which grow two long green Leaves, sharp at the Ends ; the Flowers rise on the Tops, dispos'd in Clusters or yellow Plumes. It is sweet scented and fragrant, but somewhat bitterish in Taste, breaks white, and is a little knotty. This is us'd against Diseases of the Head, Brain, Nerves, Womb, and Joints. There is prepar'd from it, as from the *Acorus*, the Confect, the Spirit, the Oil, the Extract, and the *Electuary Diacorum*.

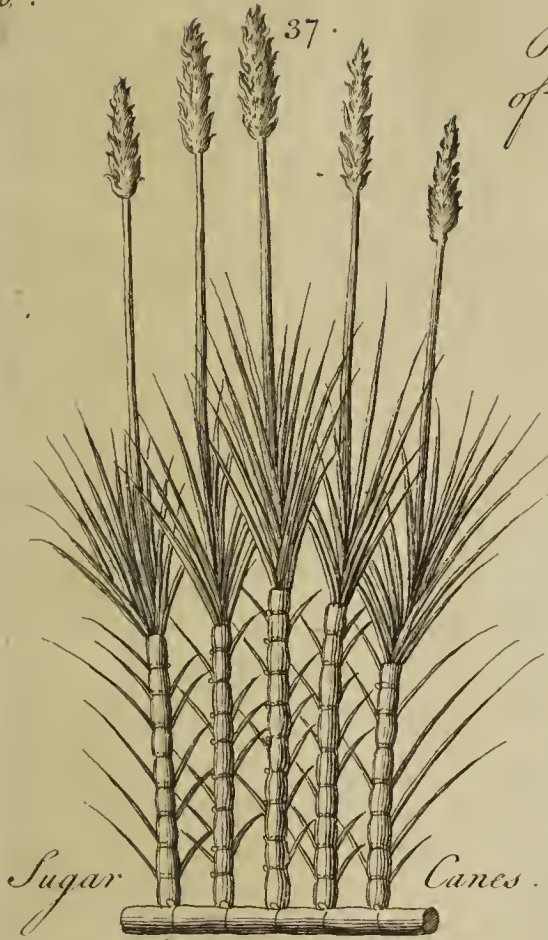
[This is the true *Calamus Aromaticus* of the Antients ; it is the Stalk of the *Cassabel Darrira*, Alp. Exol. It grows in *Egypt*, and has four leav'd Flowers, succeeded by long pointed Seed-Vessels, full of very small black Seed ; but its Virtues are unknown among us at present.

38. Of the Sugar-Cane.

Sugar-Canes are Reeds which grow plentifully in several Parts of the *Pomet*. *West-Indies*, in *Brasil*, and the *Antilles* Isles. These Canes, or Reeds, being in the Ground, shoot out from every Joint, another Cane, of five or six Foot high, which is furnish'd with long, green, narrow, sharp Leaves. In the Midway of the Height of every Cane, there grows a Stalk, terminated in a Point, at the Top of which stands a kind of Flower, of a Silver Colour, and in the Shape of a Plume.

The *Indians* prepare the Ground, digging about half a Foot deep, with their Spades, in Furrows, in each of which they place a Cane of about three Foot long, and lay two other Canes, one at each End, for a Foot Length under it ; and so continue to plant, 'till the Ground is full. At the End of six or seven Months, which is the Time that they begin to raise their Stalks, they take care to cut for the Preservation of the Sugar, otherwise there would be a great deal lost. These Stalks are what the Savages very much use to make their Bows of.

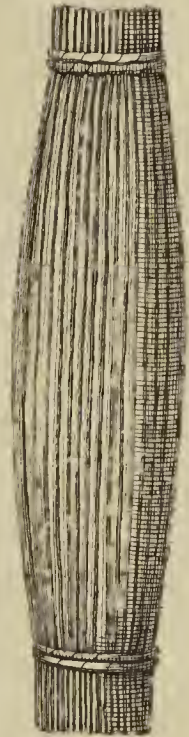
Book 2^d.
of Roots.



Sugar Canes.



Calamus Aromaticus.



of Woods

Book 3^d.
pag. 68.

Log Wood



Brasil Wood



39. *The Manner in which Sugar is drawn from the Canes.*

THE *Americans* having cut their *Pomet.* Canes above the first Joint, and freed them from their Leaves, make them into Bundles, and carry them to the Mill, which is compos'd of three Rollers of an equal Size, and equally arm'd with Plates of Iron, where the Canes are to pass. The Roller in the Middle is rais'd much higher than the rest, to the End that the two Poles, which are affix'd cross-ways at the Top, and to which the Beasts are yolk'd, may turn about freely, without being hinder'd by the Machine. The great Roller in the Middle is furrounded with a Cog, full of Teeth, which bite upon the Sides of the two other Rollers adjoining to it, which makes them turn about, grind and bruise the Canes, which pass quite round the great Roller, and come out dry, and squeez'd from all their Juice. If by Accident the *Indian*, or whoever feeds the Mill with Canes, should happen to have his Fingers catch'd in the Mill, they must immediately cut off his Arm, lest the whole Body should be drawn in and ground to Pieces: Therefore as soon as they see any one have his Finger or Hand catch'd, the Person standing by cuts off his Arm with a Hanger, and he is afterwards cur'd, and kept for other Service. The Juice falling into a Vessel which is below the Mill, and being drawn off, runs by a little Channel into the first Boiler, which holds about two Hog-heads, where it is heated by a small Fire, and set a boiling, in order to make a very thick Scum arise: The *West-Indians* keep this Scum to feed their Cattle with. This Liquor being well scum'd is put into a second *Boiler*, where they make it boil again, throwing in, from Time to Time, warm Water, in which they have beat up some Eggs: Having been thus purified, they pass it through Strainers; and, after it has done running, put it into a third Boiler, which is of Brass or Copper, and then again, upon another refining, into a fourth Boiler; and when it begins to cool, and they find it rises to a Grain, they pass a Scimmer, or wooden *Spathula* underneath it, from the Right to the Left, to see what Quality the Graining is of: The Sugar being thus ready, while it remains hot, is cast into Moulds, or Earthen Pots, with Holes in their Bottoms, yet shut: At the End of twenty-four Hours, which is the ordinary Time the Sugar takes to incorporate, the *Negroes* carry the Pots into their Warehouses; and after they have open'd the Holes, and pierced the Sugar, they set the Moulds upon little Pots or Jars, in order to receive the Syrup, or Molasses, which

runs from it. When the Syrup is run from the Sugar, they take it out of the Moulds, and cut it afterwards with a Knife; and this Sugar cut in this Manner, is call'd the grey *Muscavado* Sugar; which, to be in its Perfection, ought to be of a whitish Grey, dry, the least Fat, or smelling of the Fire that may be. This *Muscavado* is the Basis and Foundation of all the other Sugars sold among us.

It is but little in Use, though very proper to make Syrups and colour'd Confects.

Of Cassonade, or Powder Sugar.

The *Cassonade* is made from the grey *Muscavado* run again; and, after it has been clarify'd, strain'd and boil'd, and cast into the Moulds, and so prepared as we have been speaking before. After the Syrup is drain'd out, they lay upon the Sugar about an Inch Thickness of Clay, wetted with common Water, that the Moisture which is in the Clay may get through the Sugar, and take away with it whatever fat or bad Matter might remain in it: When it will run no longer, and the Clay at the Top is dry, they take the Sugar out of the Moulds, and cut the Cakes into three Pieces, the Top, the Middle, and the Bottom, which they dry separately, according to their Fineness. The finest Powder Sugar is that of *Brazil*; which is extremely white, dry, and well grain'd, of a Violet Taste and Flavour. The *Cassonade*, or Powder Sugar, is much in Use among the Confectioners; above all, that of *Brazil*, by reason that it is less subject to candy; upon which Account the Confectioners value it the more.

The Sugar, which we improperly call Sugar of seven Pounds Weight, because it as often weighs ten or twelve, is made of the grey *Muscavado*, form'd into Loaves, as we have describ'd before. The Sugar of seven Pounds is distinguish'd into three Sorts; to wit, the white, the second, and the last, which is of a browner Colour; the whiter the Sugar is, the better stov'd, grain'd, and dry'd, the more it is esteem'd. The less the Moulds are, that is, the less the Loaf is made, and the whiter it is, so much the dearer it is.

The Use of this is to make choice Syrups, white Confects, and to preserve *Apricots*, and the like.

Of Sugar-Royal, and Demy-Royal.

The Sugar call'd *Royal*, from its extraordinary Whiteness, is made from the small white Sugar, or Powder-Sugar, of *Brazil*, melted and cast into a Loaf as the former. This *Sugar-Royal* ought to be extremely white throughout the Whole; that

is to say, as fine at the Top as the Bottom, of a clear, compact, shining Grain, notwithstanding easy to break; which is the general Observation of Sugars, that are well bak'd, and of a kindly Sort. We sell besides, another Sort we call *Demy-Royal*; which is a small Sugar-Loaf, very white, and wrapp'd in a blue Paper, which comes from *Holland*.

The *Dutch* formerly brought us Sugars of eighteen and twenty Pounds, wrapp'd in Palm-Leaves instead of Paper; for which Reason it was call'd Palm-Sugar, which was a white fat Sugar of a good Sort, and a Violet Taste. We used to have besides another Sugar from the *Madairs*, but we have no more of it now, because we have it from several other Islands much better.

Of Brown Sugar.

This Brown Sugar is one Sort of the *Muscavado*, which they turn to Powder Sugar, and is made of the Syrup of the Seven-Pound Sugar, after the same Manner as the others are made. It ought to be of a greyish red Colour, dry, and not smelling of burning; for there is some to be met with so moist, and with so much of the burnt Smell, that it is almost impossible to use it. The Use of the Brown Sugar was formerly very considerable, in that it serv'd to put in Clysters: At present several Apothecaries, very improperly, employ it to make many of their Syrups with, which must be very disgustful, by reason of its nauseous Taste, and its near Alliance to the Molasses themselves, which some call the Syrup of Sugar, and which never ought to be used in Physick; great Quantities of it are used in *Holland* to temper Snuff with, and to sell to poor People instead of Sugar: I have been assured, however, that Molasses are better for distilling Rum than the *Muscavado* Sugar.

Of White and Red Sugar-Candy.

The White Sugar-Candy is made of the white *Lisbon* Sugar, melted and boiled to a Candy thus: Dissolve your Sugar in pure Water, then boil it to the Consistency of a Syrup, which pour into Pots or Vessels, wherein little Sticks have been laid, in order that the Sugar may stick to them during the fifteen Days that it is in the Stove; but the great Care must be to keep the Stove Fire equal during these fifteen Days that it remains there; they afterwards take it out of the Stove to drain and dry it, and then put it up in Boxes for Use.

Chuse this Sugar-Candy white, dry, clear and transparent. The very finest Candy we have

comes from *Holland*, and it is sold for Four-pence or Five-pence a Pound dearer than that of *Tours*, *Orleans*, *Paris*, and other Places. This Sugar-Candy is esteem'd good to moisten the Breast and cure Rheums.

The Red Sugar-Candy is made the same Way with the White, except that this is made with brown *Muscavado*. Both Sorts are better for Rheums, Coughs, Colds, Catarrhs, Asthmas, Wheezings, &c. than common Sugar; because being harder, they take longer Time to melt in the Mouth; and withal keep the Throat and Stomach moister than Sugar does. Put into the Eyes in fine Powder, they take away their Dimness, and heal them being Blood-shot; also they cleanse old Sores, being strew'd gently upon them.

That Red Sugar-Candy is best which is made in *Holland*, and is the driest and reddest.

Of Barley-Sugar, White and Amber-colour'd, Sugar of Roses, Pastiles of Portugal, &c.

Barley-Sugar is made either of white Sugar or brown; the first Sort is boil'd 'till the Sugar becomes brittle, and will easily break after it be cold. When it is boil'd to a Height, cast it upon a Marble, that is first lubricated with Oil of Sweet Almonds; and afterwards work it to a Paste, in any Figure you fancy. The other Sort, improperly call'd Barley-Sugar, is made of Cassonade, or coarse Powder Sugar, clarified and boil'd to a Toughness that will work with your Hands to any Shape, and is commonly made up in little twisted Sticks. This Kind of Sugar is more difficult to make than the other, because of hitting the exact Proportion of boiling it to such a Height that they may work it as they please: This ought to be of a fine Amber-Colour, dry, new made, and such as does not stick to the Teeth: Some Confectioners, to make it of a fine Colour, stain it with Saffron.

Sugar of Roses is made of white Sugar clarified, and boil'd to a Consistence of Tablets, or little Cakes, in Rose-water, and so cast into what Form you like best.

The *Pastiles*, or *Portugal* Lozenges, are made the same Way, of the finest Sugar that can be had, made into a Paste with Gum *Tragacanth*, to which is added some Ambergreese, or any other Perfume, most grateful to the Maker's Fancy.

Of Sugar-Plums.

There are infinite Variety of Flowers, Seeds, Berries, Kernels, Plums, and the like, which are, by the Confectioners, cover'd with Sugar, and bear the Name of Sugar-Plums, which would

would be endless to set down, and are too frivolous for a Work of this Nature: The most common of the Shops are Carraway-Confects, Coriander, and Nonpareille, which is nothing but Orrice-Powder, cover'd with Sugar; and what is much in Vogue at *Paris* is green Anise: Besides these, we have Almond-Confects, Chocolate, Coffee, Barberries, Pistachia Nuts. &c. Orange Chips and Flowers, Lemon-Peel, Cinnamon, Cloves, and many other Roots, Barks, Fruits, Flowers, &c. too numerous to speak of, together with Pastes, liquid Confections, and the like; many of which are useful in the Apothecaries Shops, as green Ginger, Oranges, Jelly of Barberries, &c.

Of Spirit and Oil of Sugar.

Beside all the other Uses that we make of Sugar, there is an acid Spirit drawn from it, by Chymistry, with the Help of *Sal Armoniack*, which, after Rectification, is a powerful Aperitive, and proper for many Diseases, as the Gravel, Dropsy and Dyfentery. The Dose is as much as is sufficient to make an agreeable Acidity in any convenient Liquor proper to the Distemper. As the Oil of Sugar, even after Rectification, is a black stinking Oil, I shall direct you to another Sort, which, strictly speaking, is not an Oil, but rather a Liquor of Sugar, *per Deliquium*. This is made by putting Sugar into a hard Egg, and setting it in a cold Place, to run into a Liquor, the same Way that Oil of Myrrh is made; and is used to beautify the Face, or inwardly to remove Pains in the Stomach.

Sugar, in Latin *Saccharum*, or *Suc-Lemery*. *charum*, *Zaccarum*, or *Zuccharum*, is an essential Salt, of a Kind of Reed, call'd *Arundo Saccharifera*, or the Sugar-Cane, which grows plentifully in many Parts of the *Indies*, as in *Brazil*, and many other Places. This Plant bears on each Joint a Cane of five or six Feet high, adorn'd with long, straight, green Leaves, and carries on its Top a Silver-colour'd Flower, like a Plume of Feathers.

The Juice of the Canes is made by pressing them through the Rowlers of a Mill, from whence there runs a great Quantity of sweet pleasant Juice, which being put into Boilers, the watry Part is, by the Force of the Fire, evaporated, 'till it comes to a Consistency; after which they cast it into a Mixture made of certain Ingredients, fit to cleanse and prepare it for graining. All the Time it is boiling, with large Copper Scummers they take off the Scum, which constantly rises in great Quantities, until it be fit to empty into Coolers, *viz.* 'till it arrives to its just Body: From the Coolers, it is again shifted into

Earthen Pots, with Holes in their Bottoms, and other Pots they call Drips, under them, for receiving the Molosses; which, in about a Month's Time, will be separated from that which afterwards is call'd *Muscavado Sugar*, being of a pale yellowish Colour; this is then knock'd out of the Pots, and put into Casks, or Hogheads, for Transportation.

The first Kind of *Molosses* is either boil'd up again to draw from it a Kind of dusky, pale-grey Sugar, call'd *Pancels*, or sent in Casks for *England*. From this Sugar there drips a second Sort of *Molosses*, which, with the Scum that arises in all the Boilings, together with the Washings of the Boilers, Coolers, Pots and other Instruments, is preserv'd in great Cisterns, where it ferments, from which they distil that famous Spirit call'd *Rum*, a noble Liquor, not at all inferior in Strength to *French Brandy*, nor yet in Goodness or medical Virtues, the Flavour or Palatableness being set aside, having an *Empyreuma*, from a foetid Oil it acquires in the Distillation.

The next Thing to be consider'd is, the Refining of Sugar, to wit, the *Muscavado Sugar*: which is thus: They put it into refining Coppers, mix'd with Lime-Water, where, as it boils over a gentle Fire, much Scum will arise, which is taken off constantly 'till it comes to a sufficient Consistency for mixing it with the Whites of Eggs, well beaten up, in order to clarify it; this being done, it is boil'd up to a proper Height for refin'd Sugar, and so turn'd off into Coolers, from whence it is put into such Draining-pots as aforementioned, with their Drips: When those Pots have stood draining or dripping eight or ten Days, then Clay, properly temper'd, is put upon the Pots, which is renew'd as often as Occasion requires: This forces down all the *Molosses*; so that in seven or eight Weeks Time these Sugars will be fit for Casking.

These *Molosses*, thus proceeding from refin'd Sugar, are boil'd up again, and all the former Work repeated; from whence comes another Sort of white Sugar, call'd *Bastard White*: From this Sugar there drips a second Sort of *Molosses*, fit for nothing but the Still to make *Rum* of; it is also to be observ'd, that little or nothing is wasted in the Refining, but you have it some Way or another; for as much as the fine Sugar wants of its first Weight, you have it in the Scum and the *Molosses*, or Recrement running from it. After this Elaboration of Sugar for refining it is over, they put up in Casks or Hogheads that which is call'd Powder-Sugar, or make into Loaves what they call Loaf-Sugar; both of which are esteem'd in Goodness according to the Number of Times they have been refin'd.

When Sugar has been but once refin'd, it is a little fat or oily: Now to refine it farther, it is dissolv'd again in Lime-Water, and boil'd as before directed, taking off the Scum all the while, &c. The Sweetness Sugar has, is thought to proceed from an essential, acid Salt, mix'd with some oily Particles, of which it consists; for if by Distillation we separate the oily Parts from the saline, neither of them will be sweet, but the saline will be acid, and the Oil insipid upon the Tongue, because it makes little or no Impression upon the Nerve of Tasting; but when the Acid is entirely mix'd with it, the Edges or Points of the Acid penetrate the Pores of the gustatory Nerve, and, by opening them, carry in the oily Particles, and make them also penetrate and irritate the Nerve, whereby the Sweetness of the Taste is produced.

The Powder-Sugar, or that which is less refin'd, makes a sweeter Impression upon the Tongue than the Loaf-Sugar, or that which is more refin'd; because it contains more oily or fat Particles, whereby it remains the longer upon the Taste: This makes some prefer the coarser before the finer, for Use and Sweetening. Sugar was first known or produced in the *East-Indies*, afterwards in *Barbary* and the *African Islands*, as the *Madeiras*, *Canaries*, &c. then in the *West-Indies*, as *Jamaica*, *Barbadoes*, *Nevis*, *Antigua*, *Montserrat*, as also in the *Spanish Indies*; lastly in *Europe*, as *Spain* and *Portugal*, but not in that Plenty as it is produced in the *West-Indies*. If you make choice of it from the Place, that from the *Madeiras* was formerly accounted the best; that from the *Canaries* next, and that from *St. Thomas's* last; but now our fine *Jamaica* and *Barbadoes* Sugar is inferior to none; and next to them is reckon'd the *Lisbon* Sugar, which is the fatter, and not so white. If you chuse it for Colour, the whitest is the best; then the next to White is that of the Cream Colour, or pale Yel-

low; and lastly, the Red. If you chuse it from the Making, the treble refin'd is the best, and that which is form'd into the Loaf, the whitest of which will look like the driven Snow.

It is good for the Breast and Lungs, to smooth their Roughness, take away Asthma's, Hoarseness, ease Coughing, and to attenuate and cut tough Flegm, afflicting the Fibres of those Parts. It is very profitable for the Kidnies and Bladder, and in all the Cases aforementioned; but it is reputed bad for such as are troubled with Vapours and Hysterick Fits, and therefore such Persons ought to avoid the Use of it. Refin'd Sugar is the sharper, and better to attenuate, cut and cleanse; but the unrefin'd to levigate and lenify, and so the better for the Lungs; but being constantly used, rots and decays the Teeth, and makes the Gums scorbubutick. There are many Preparations, besides Confects and Sweet-Meats, made of Sugar; the chief of which are, first, Sugar of Roses; 2dly, Sugar of Violets; 3dly, Tincture and Liquor, acid Spirit and Oil of Sugar, Sugar Penids, Essence of Sugar, and the like.

[The Plant which produces Sugar is the *Arundo Saccharifera*. C. B. Pin. 18. *Arundo Viba Brasiliensis* dicta. Pis. 1648. *Tacomara sive Arundo Saccharifera Ejusd.* 1658. It is of a middle Nature, between the arundinaceous and mileaceous Plants. There is another Sugar call'd *Saccharum Acerum*, Maple Sugar, which is the Product of *Canada* and *New-England*, in which Countries the Natives collect the Juice of Maple Trees by Incision, and evaporate it to the Consistence of Sugar, which, while it remains unctuous, is better for internal Use than any other Kind, and the famous Syrup of *Maiden-Hair* of *Candia* is made with it: As it is brought to us it is of a greyish Colour, and tastes like other Sugar. The Inhabitants from this Sugar make Brandy, Vinegar, and a Liquor which is their common Drink.]

The End of the Book of ROOTS.



of Woods.



BOOK the Third.

Of WOODS.

P R E F A C E.

WHAT we call Wood, is, according Mr. Grew, nothing but a Multitude of very small Pipes, or hollow Fibres, some of which raise themselves erect and form perfect Circles; and others run from the Circumference to the Centre, and there mutually cross one another, like the Lines of Longitude and Latitude on a Globe, or like a Weaver's Threads, extended both in Length and Breadth, and interwoven together. In Time these take their Nourishment from the Juices of the Earth, become hard and form the Bodies of Trees; which are more or less hard and heavy as they are ranged more or less close to one another, and more or less fill'd with Resin. The only Woods sold in the Shops are those used in Medicine, in Dying, or in Inlaying, of which only I shall speak, the others being not my Business in this Work.

1. Of Wood of Aloes,

Pomet. **O**F all the Woods sold in the Shops, we have none more precious, more valuable and rare, than the true Wood of Aloes, or *Xylaloes*; upon which Account it is very little known, and every one is liable to mistake the Wood, which makes it easy to be counterfeited; It is indeed a difficult Matter to know it positively, it being describ'd so differently by different Authors: And I cannot think any more mistaken than those who write like M. de Furetiere, who says that Aloes is a large Tree that grows in the Indies very high; that the Trunk is of the Thickness of a Man's Thigh, on the Head of which is placed a vast Heap of thick indented Leaves, large at the Bottom, which narrow themselves to a Point, and are four Feet long. That the Flower is red, intermix'd with yellow, and double like a *Julyflower*; and is supported by little Branches which arise from the Trunk, with the Leaves, among which they are hid: That from the said Flower comes a Fruit, round like a large Pea, white and red: And that they draw a Juice from these Leaves by slitting them with a Knife, which they put up in Shells of Gourds: And that when this is dried in

the Sun it appears a Kind of Resin: That the Wood is spotted, scented and bitter, and the Bark is so curious, that it resembles a Skin that is of a changeable Colour.

There are several Sorts of it, but the best is the *Agallochum* of India, which comes from *Calecut*. The finest is the black Kind, of a changeable Colour, full, heavy, solid and thick, which is not at all whitish, and is difficult to set on fire. I know not where M. Furetiere had the Account before recited, which confounds the Plant which produces the Aloes with the true *Lignum Aloes* Tree.

Others say, the Reason we have not the true Aloes Wood is, that it grows no where but in the terrestrial Paradise, and that it is impossible to have it but by the Means of Floods: And others, because it is not produced among us, except in Deserts and upon inaccessible Mountains; not only so from their Height, but because of the wild Beasts that inhabit them, as the Lion, the Tiger, the Panther and the like; besides a thousand other idle Stories that are told about it, too long to recount here; instead of which I shall declare what I have learn'd from some of the Retinue of the Embassadors to Siam, who brought some of this Wood as a Present to the late King of France, Lewis the Fourteenth, as well wrought as unwrought;

wrought; among the rest an Ewer, with its Salver, proper to wash Hands in, made at *Siam*, after the Mode of that Country. This Bason, though of Wood, is more valued than if it had been of massy Gold. They say that the true *Lignum Aloes* Tree grows in *Cochinchina*, in the Kingdom of *Lao* and in *China*, and is of the Size and Shape of the Olive Tree, having Leaves something of the same Sort, among which grows a little red Fruit, like our Cherry. A great deal of *Lignum Aloes* is brought to *Surat*, the most refinous of which is the most valued; it is distinguish'd by the Bigness or Smallness of the Pieces.

It is observable, that the Trunk of this Tree is of three Colours, which are no other than different Parts of the same Substance: The first Wood, which lies immediately under the Bark, is of a black Colour, solid, heavy, and almost like black Ebony; the *Portuguese* call this *Eagle-Wood*. The Second, which is a light veiny Wood, like rotten Wood, and of a tann'd Colour, is what we call *Calambouc*, or the true Wood of *Aloes*. The third Sort, which is the Heart, is the precious *Tamback*, or *Calamback* Wood; but the great Scarcity and high Price of it is the Reason why I shall say no more of it, having never seen any of it.

We ought to chuse the Wood of a shining Dye, and of a light Yellow within, bitter in Taste, especially when it is held some Time in the Mouth, from whence it takes the Name of *Aloes-Wood*, because it has a Bitterness like that of the *Aloes*. It should be light and porous, like rotten Wood; and when put into the Fire, burn like Wax and yield a sweet Smell.

This Wood of *Aloes* has no Use that I know of but in Physick. It is very aromatick, cordial and cephalick, as also a Destroyer of Worms: Its principal Use is in some Galenical Compositions. As to the *Eagle-Wood*, it is of no Use in *France*; it serves the *Indians* to make their small Wares with and their Weapons, and it is so scarce in *France* that it is not easy to find any of it; which is quite contrary to the Opinion of those who have writ of it, and say that it is very common. Besides the *Columback-Wood*, or true *Aloes*, we have Quantities enough of other Kinds brought to us, which bear the same Name; but as it is impossible for me to discover all the Differences, I shall inform you, that you ought to reject all others whatsoever that are not the Wood we have been speaking of, which is entirely different from others, both in Shape and Figure, in that the pretended Woods of *Aloes* are in great heavy Pieces, sometimes Red, sometimes Green, and likewise of several other Colours; and what makes it

easier to know the Difference is, that the true *Columback* is commonly in flat light Pieces. Some People will have it that the *Abor Vita*, or *Thuya*, which is at *Fontainebleau*, and in the Royal Garden at *Paris*, is the Tree that yields the *Aloes-Wood*; but I have prov'd it otherwise, as I had one of those Trees three Years, at the End of which Time it died, and I had it taken up; after having exposed it to the Air some Time, the strong Smell and Taste it had while growing was quite lost, and it became extremely light, of an insipid Taste, and white without and within.

Aloes, *Agallochum*, *Xylaloes*, or Wood of *Aloes*, is brought from *Bantam* in *Lemery*. the *East-Indies*, where they call it *Columback*. It comes to us in Chips, and is of a most fragrant Smell and darkish Colour; the knotty, resinous and blackish Sort, which is many times full of black Resin, like *Aloes*, is reckon'd the best; or that which is of blackish Purple, with Ash-colour'd Veins, of a bitter Taste and heavy: The chief Sign of its Goodness is, that the Chips being put into Water will swim, and when burning on Fire-Coals they will sweat or fry, afford a sweet Scent, and leave Bubbles behind them, not easily vanishing. It is hot and dry, cephalick, neurotick, stomachick, cardiack, alexipharmick, strengthens the Brain, Heart, Nerves, Spirits and whole Body; is excellent against Faintings and Swoonings, and kills Worms by its Bitterness. Dose in Powder, half a Dram to a Dram. The Chymical Oil is likewise used like that of *Rhodum*, and sometimes internally to the same Purposes as the Wood.

[This is the *Lignum seu Arbor fragrans Siamensis Kiffina*, *Latinis Arbor Aquilæ & Aloes dicta* *cujus fragrans Lignum appellatur Agallochum*. *Kemp. Amen. 903. Agallochum verum. Eph. Germ. Dec. 2. p. 74.* We account that the best which is of a blackish Purple Colour, and so light as to swim upon Water; but there is scarce any such now to be found; for the best we meet with will sink in Water. The Juice of this Wood, while growing, is poisonous and caustick, and often deprives the People employ'd in cutting it of their Sight. It has been greatly esteem'd, but of late is grown into Disuse.]

2. Of Asphaltum, or Rose-Wood.

OUR *Asphaltum* is a Wood which was as little known to the *Antients* as the true *Aloes-Wood*, and which at present we only know by Relations, which we cannot absolutely depend upon.

I have never been able, with all the Diligence I could use, to get clearly at the Truth, and can therefore

therefore only declare what I have learn'd, which is, that *Asphalatum* is the stringy Pieces of a small *Chinese* Tree, something like *Calemba*; they are solid, of a reddish Brown, sometimes mark'd with whitish Streaks, hard and bituminous, thicker, of a looser Texture, and less firm than the *Lignum Aloe*, of a bitterish, fat and resinous Taste, and weak Smell.

The Shrub is thorny, it grows on the Mountains, and is by some accounted poisonous.

There are several Species of the *Asphalatum* describ'd by the Antients which are not to be found, and are hardly known among us. The *Asphalatum Wood* of the Antients was used in perfum'd Ointments; they boil'd the Wood in Oil, by which the Resin was extracted, and then used the Oil.

Asphalatum, according to the Accounts of the *Chinese*, is gather'd in the same Manner as the *Lignum Aloe*, for they take only the more fragrant and resinous Pieces.

There are three Sorts of Wood that bear this Name. The first is a blackish Wood, which I believe to be the true *Eagle-Wood*. The second is a Wood something bitter, heavy, oily, full of Veins of different Colours, which, all mix'd together, make it a reddish Wood: It is cover'd with a grey Bark, thick and very rugged. As to the Figure of the said Tree, the Leaves, Flowers, Fruit, and Country where it grows, I have been able to learn nothing. Whether this be the false or true *Asphalatum*, it is what is most receiv'd for genuine, by those who are suppos'd to know it the best, and is what we commonly sell.

The third *Asphalatum-Wood* is as known and common among us, as the two before mention'd are unknown and scarce. This third Sort is what we call *Rhodium*, or *Rose-Wood*, because it has a Smell altogether resembling that of Roses. The *Rose-Wood* is of a pale brown Colour; it is brought from several Parts of the *Levant*, but chiefly from the Isle of *Rhodes* and *Cyprus*, from whence it takes the Name of *Rose* or *Cyprus-Wood*.

Father *Tertre*, however, will have it that there is a Difference between the *Rose* and *Cyprus-Wood*; he says, that which is call'd *Rose-Wood* in *Guadaloupa*, is properly that which the Inhabitants of *Martinico* call *Cyprus-Wood*. It is very certain that there are two Sorts of *Rose-Wood* which we confound together by that Name, without making use of that of *Cyprus*. The two Trees so exactly resemble one another, in Height, Size, Bark, Leaves, Flowers and Smell, that most Part of the Inhabitants mistake one for the other: I have, notwithstanding, seen some curious People of *Guadaloupa*, who have call'd this Wood, which

the Inhabitants of *Martinico* call *Rose-Wood*, *Marble-Wood*; because the Heart of the Wood is stain'd like Marble, with White, Black and Yellow, which is the only Distinction I could observe. This Tree grows very high and straight, with long Leaves like the Chestnut, but more pliant hairy and whiter; it bears large Clusters of small white Flowers, and after them little smooth black Seeds; the Bark of the Wood is whitish, and almost like the young Oak; in working on it, it sends forth a Smell so sweet that the Rose cannot compare with it. This Wood loses its Smell in time, but it recovers it again upon being fresh cut, or strongly rubb'd one Piece against another. It is very good to build withal. It ought to be chosen new, dry, of a yellowish brown Colour and a Rose-like Smell, and in the largest and evenest Pieces that may be.

This Wood is used to make Beads of, and is of some Use in Physick, by reason of its fine Smell; it is serviceable to the Distillers to make Rose-Water, or at least to give their Rose-Water a good Scent. The Surgeons and Barbers use it in Decoctions and Tinctures for their several Purposes. Some People employ this like *Yellow Sanders*, and after it is reduced to Powder mix it up in Pastiles for burning. The *Dutch* draw a white Oil from it very odoriferous, which they transport abroad under the Name of *Oil of Rhodium*, and which we sell upon several Occasions, as to the Perfumers and others. 'Tis observable that this Oil, when new, is like Oil of Olive; but after some Time it becomes of a dark Red. The Wood, by Distillation, yields a red Spirit, and a black foetid Oil, which is proper for curing of Scabs and Tetters.

There are several Sorts of the *Asphalatum* that are not distinguishable but *Lemery*, by the Curious, as the *Aloe-Wood*, that is call'd the *Eagle*; and the *Lignum Rhodium*, which is so call'd, not that it bears Roses, or is a Rose-Tree, but from the Flavour and Fragrancy of the Wood, and the odoriferous Oil it yields. This is brought from the *Levant*, and some from the *Canaries*; the best is the fattest, or most oily, of a deep yellow Colour, inclining to Red, strong scented if broken, and of a compact heavy Substance. This Wood contains two profitable Bodies, the one spiritous and watry, and the other oily and sulphureous; both which are very subtil and volatile. To make the Oil, chuse the weightiest and best scented Wood, rasp'd finely, of which take four Pounds; Saltpeter one Pound; infuse them in Rain-Water eight or ten Days, and draw off the Oil in proper Vessels. There is at the same Time a Water drawn from thence, which may be used as Rose-Water for Perfumers,

and

for a Vehicle where proper. The Oil, which is clear, fair, yellowish, and of a fragrant Smell, is used inwardly against Obstructions in the Kidneys or Bladder, freeing them from Sand, Gravel and slimy Matter, that load and stop up the Passages. You may make it into an *Eleosaccharum* with refined Sugar, and then dissolve it in its own Water, or any proper Diuretick. It is used with good Success in Gargles, and to cleanse and cure Ulcers in the Mouth, or other Parts of the Body. It is cephalick, neurotick, cardiack, antispasmodick, and arthritick, and may be given from three Drops to ten or twelve. This Oil, besides all its internal Uses, is accounted one of the strongest vegetable Perfumes, and holds its Odour the longest.

[This, and not the Lignum Aloes, is the true *Calambac-Wood*; it is the *Aspalathum*, Mon. Exot. 7. *Agallochum Præstantissimum*. Jons. Dendro. 460. It is brought to us from the *East-Indies* and the *Canaries*. The Antients varied so much from one another in their Accounts of this Wood, that it is probable they have described different Woods under this Name. It has been much in Esteem, but is now never used unless in the Oil to scent Pomatums, &c.]

3. Of Sanders.

Pomet. **T**HE Sanders are three Sorts of Woods of different Colours, Smell and Figure; all three, as I have been assured coming from the same Tree, and having no other Difference than from the different Countries where they grow. This Tree grows about the Height of our Walnut-Tree, having Leaves like the Mastich; it bears a small Fruit, of the Size of a Cherry, green at first, and black when ripe, after which it easily falls off the Tree, is of an insipid Taste and no Value.

The yellow Sanders is brought to us from *China* and *Siam* in Billets, freed from the Bark; the *French*, when they return'd from *Siam* in 1686, brought with them a good Quantity. Chuse the heaviest Wood, of a good Scent and yellow, from whence it is call'd *Citrine Sanders*, which signifies yellow; but take Care, at the same Time, you be not impos'd on with the *Citron Wood*, which is often sold in its Stead. The yellow Sanders is most used in Physick, and by the Perfumers.

The white Sanders is something like the yellow, but not having the Colour or the Smell, it makes a vast Difference. This Wood is brought in Billets, divested of its Bark, from the Isle of *Timor*. Chuse such as is heaviest, white, and of the best Smell you can get. It is used in Physick as the yellow.

The red Sanders is brought to us in thick long Billets, from the Maritime Places on the Coast of *Cormandel*. Chuse that which is blackish without, of a deep red within, hard to cleave, of an insipid Taste, and almost no Smell; and take care you do not get Coral-Wood, which is often sold in its place, which I shall mention by and by.

The Sanders are something astringent. especially the red; they fortify the Heart and Stomach, and purify the Blood, they are given inwardly in Ptyans, or in Powder from half a Dram to a Dram, and are Ingredients in many Compositions.

There is beside these a fourth Sort of Sanders, call'd *Taffety-Sanders*, or Sanders of *Constantinople*, which serves to give a red Stain, boil'd in Water with any Acids, like the red.

Of the Citron-Wood.

The *Citron-Wood*, which the *Americans* call *Candle-Wood*, because being cut into Splinters it gives a Light, which they use to light themselves by, is the Trunk of a large thick Tree, that grows very common in the Leeward-Islands. This Tree is very beautiful to the Eye, having many large and long Branches, full of Leaves, like those of the Bay-Tree, but bigger, and of a more shining green; and Flowers like the Orange, of a Jessamine Smell, after which grow little black Fruit, of the Size of Pepper. It is the Trunk of this Tree, that the Reverend Father *Du Tertre* falsely imagin'd to be the yellow Sanders, and which afterwards gave Occasion to certain Drug-gists at *Rouen* to buy of the Company, and sell it boldly again for the true yellow Sanders, to those who understood it not, or would buy without seeing it, or upon their Words, for the true Wood; or they would sometimes shew a Sample of the true yellow Sanders of the *Indies*, and afterwards sell this *Citron*, or false Sanders. The Cheat of this is easy to discover, in that the true Sanders tastes and smells sweet and agreeable, and is but moderately heavy and resinous; but, on the contrary, the *Citron-Wood*, which is heavy and oily, has a strong Smell, like the *Citron*, from whence it derives its Name; and further, the Billets of the true Sanders weigh not above a hundred Pounds. and those of the *Citron* near a thousand. This Wood is of no Use in Physick, but is very useful to work into proper Utensils; for after it has been exposed some Time in the Air, it will look like polish'd Cocoa. The Gum of the *Citron-Wood* is very fragrant; and what is most remarkable, is, that the older the Trees, the sweeter is the Gum.

This

This Wood likewise bears the Name of *Jessamine-Wood*, There grows, besides, in these Isles, another *Candle-Wood*, which has such Leaves, Flowers and Fruit as the *Citron-Wood*, except that the Flowers are more fat, much thicker and rounder; but as this Wood comes not to us, I shall say nothing further, but that Father *Du Tertre* says, that this Tree is scarce, and grows no where but on the Sea-Side, and believes it to be a Kind of *Aloes-Wood*. He observes likewise, that this Tree yields a very odoriferous Gum, and that the older the Tree is, the better it smells; and that the Savages make no other Use of it but for Lights; except that they use the inner Rind of the Bark, from whence they press a Juice, valued by them as a sovereign Remedy for Inflammations of the Eyes.

Of Coral-Wood.

Besides the *Candle-Wood*, we have brought to us, from the *Leeward-Islands*, a certain red Wood, which they call *Coral-Wood*: It is with this Wood they counterfeit the true red Sanders; but that which makes it not difficult to discover the Difference is, that the *Coral-Wood* is of a shining Red, light and stringy; but the true Sanders is of a deep Red, without Threads, and very heavy.

The *Americans* use the *Coral-Wood* for several Sorts of Work. Besides this, in these Isles there grow two other Kinds of Trees, which bear the Name of *Coral*, because their Fruit are red, like *Coral*, except that on the Right Side of the Bud they have a little black Spot. This Fruit is what we call and sell by the Name of the *red American Pease*, which are extremely bitter, and some pretend that these Fruits, moisten'd with the Juice of Citrons, have the Quality of soldering Gold and Silver, like Borax.

Father *Du Tertre* says, that there are so many red Woods in these Isles, that in every ten Leagues they are found of different Colours, some deeper, some paler, and that they are all very full, heavy, solid, and excellent for making the best Joiners Work; the Wood being, for the most Part, not subject to decay.

Santalum Citrinum, Album vel Rubrum, the yellow, white, or red Sanders, are exotick Woods, brought from both the *Indies*, of a very fragrant and sweet Smell. The *yellow* is to be chose before the rest, and that which is of the most agreeable Odour, heavy and knotty. Both this and the *white* are used in Faintings, Swoonings, Palpitation of the Heart, Obstructions of the Liver and Spleen. They are good against vomiting, and dry up Catarrhs;

outwardly the Fume prevails against the Head-ach, stops Fluxes and Rheums of the Head, with other preternatural Defluctions.

The *red Sanders* is also brought from the *Indies*, being a red heavy Wood, and commonly sold in the Apothecaries Shops in Powder: It is cooling and more astringent than any of the rest; is used in Catarrhs, to stay thin Rheums falling down upon the Lungs, and to abate the Heat of Fevers, to stop Fluxes, and the *Profluvium seminis*, with the Gonorrhœa in either Sex: But the chief Use of it, this Day, among us, is to colour Medicines with, as Lucatellus Balsam, and other Balfams, Tinctures, and the like.

[It is generally supposed that the *white* and *yellow Sanders* are the Wood of the same Tree, the inner Part or Heart being the *Yellow*, and the Outer the *White*, though there are some who say they are the Wood of different Trees. They are the *Santalum Album* and *Citrinum* of Authors. The Tree which is believ'd to produce them both, has Leaves like the Tamarind Tree, composed of a Multitude of small Leaves, set on both Sides of one Middle Rib; the Flowers are of a bluish Black, and the Fruit of the Bigness of a Cherry. They are both brought to us from the *East-Indies*.

The *Red* is a Species of the Brazil Wood, it is brought to us from the *East-Indies*; the Tree which bears it grows beyond the *Ganges*. Its Leaves are like those of the Ash, and its Fruit contain'd in Pods, thick, bivalve, broad at the End, and the Seed itself oblong.

The Labourers who cut this Wood are often seiz'd with malignant Fevers and Deliria of a very singular Kind, the affected Person generally imitating the Actions of his Trade: And they have also a *Fames Canina*, of a very terrible Kind.]

4. Of Nephritick Wood.

THE *Nephritick Wood* is brought to us from *New-Spain*, chiefly from *Pomct.* the Kingdom of *Mexico*, where it is call'd *Coult* and *Tlapalcypatly*, and by us *Nephritick*, by reason it is a sovereign Remedy in Stone, Gravel, and Difficulty of Urine. It is a Tree like our Pear-Tree, having Leaves like Chich-Pease, but much less.

Chuse the Wood well freed from the thick Bark, which is of a bitterish Taste, and yellowish red, and being put into a little cold Water, strikes a fine Sky-colour'd blue, which is a certain Sign of its being true. They sell in the room of this a red Ebony, or Granadilla, which is readily distinguish'd from the other, in that it is of a

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deeper

deeper red, and by infusing it in Water, it gives a yellow Colour, like another Wood we have brought also to us from the *Indies* and *Brazil*, the Name of which we have not yet learn'd; however, you ought to reject all Sorts of Woods that are sold for the true *Nephritick*, if they will not yield a blue Tincture. This Wood, infused in Water, is frequently used by Persons afflicted with the Stone or Gravel for their Drink, and to mix in their Wine. Those who would add to the Virtue of the Wood, put radish-Water thereto, with a little Salt of Wormwood, that is to say, about half a Dram to a Glass.

It is also good for Obstructions of the Liver and Spleen, infused in Wine or given in Ptisans, or in Powder, in any proper Liquor; the Dose is from half a Dram to a Dram in Powder, and from two Drams to half an Ounce, or more, in Infusion.

The *Nephritick Wood* is thick, without Knots, white without, and blueish within, which, by Infusion, makes a sky-colour'd Liquor; therefore, to avoid being deceiv'd when you buy it, scrape some of the inner Parts of the Wood, put it into Water, and let it stand four or five Hours; if it turns the Water into a blueish Tincture, it is right and good; but if not, and of a yellow Colour, it is false. It grows in *America*, and is brought from *Mexico*, and other Places of the *Spanish West-Indies*. It is call'd *Nephriticum*, because it is a Specifick in Diseases of the Reins and Bladder. *Schroder* says, it grows like a Pear-Tree, and is a Kind of Ash. It is hot and dry, opens Obstructions of the Liver, Spleen, Reins and Womb; cures all Stoppages of Urine, whether in the Kidneys, Ureters, or Bladder, bringing away Sand, Gravel, Slime, or other tartarous Matter generated in those Parts.

[This is the Wood of the *Balanus myrsifera* five glans Unguentaria. G. Em. 1433. *Nux Ben* five Glans Unguentaria. Park. 238. It grows in both the *Indies*; the Leaves are like those of the Ash, but of a deeper green; the Flower five leav'd; the Fruit is a Kind of trivalve Husk, full of a white firm Substance, enclosing triangular Seeds. The Wood is reddish when fresh, but turns brown and loses its Virtue in keeping. The Infusion of it held in a Vial between the Eye and the Sun, is yellow, and held so as to keep the Eye between the Sun and it, is of a beautiful blue; the true Wood, therefore, may be rejected for staining the Water yellow, only because it is view'd in a wrong Light. The Wood is now not much used in Medicine. The Oil, which we call Oil of *Ben*, which is brought to us

from *Italy*, is made by Expression from the Fruit of this Tree, which is the *Ben Nutt* of the Shops.]

5. Of Lentisk, or Mastick-Wood.

THE *Lentisk* is a Tree which has Leaves like *Myrtle*, among which it bears Flowers, which produce small Berries, in Clusters, green at first, and blackish afterwards, as they ripen, there likewise grows on the Leaves sometimes, a little Husk or Bag, full of Liquor, from which little flying Insects are generated, as from the Scarlet-Grain, or Kermes-Berry.

These Trees are very common in *Egypt* and the *Indies*, and particularly the Isle of *Chio*, where they are so industriously cultivated and watch'd, that a Man who cuts one of them down, whether designedly or not, even tho' he be the Owner, has his Hand cut off for the Offence, unless the Tree was old and past Service.

It is from this Tree that the Mastich runs, which I shall speak of presently. They plant a great many of these Trees in *Italy*, and the *Italians* make an Oil of the Berries, after the same Manner as we do the Oil of Bay-berries. This is used to the same Intentions as the Leaf and the Wood; the last of which they work into Tooth-pickers in *Provence* and *Languedoc*.

Chuse your *Lentisk-Wood* heavy, compact, and firm, that is, tough, or hard to break, grey without and white within, of an astringent Taste, and adorn'd with Leaves, if possible.

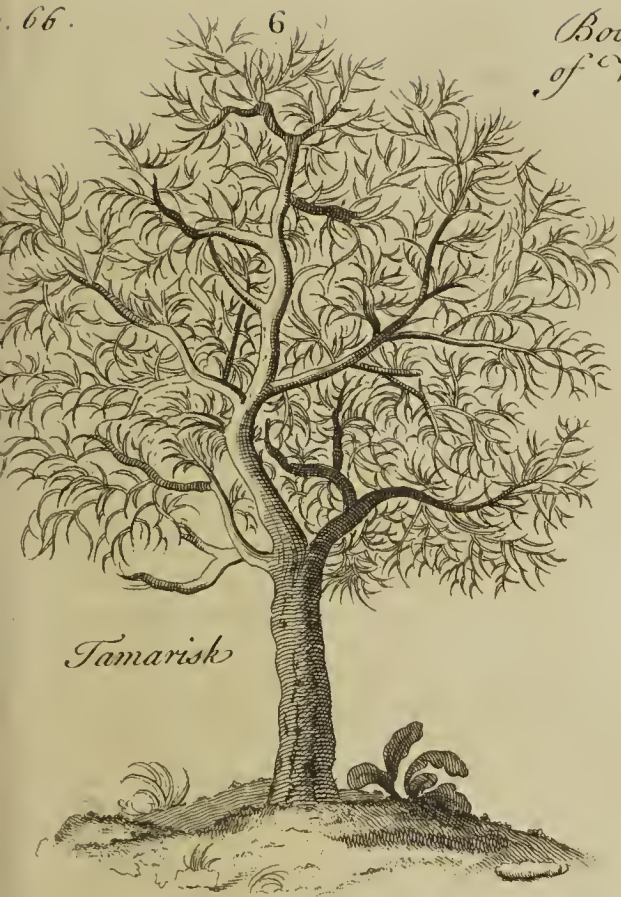
Of Mastick in Tear.

The *Mastick* in Tear, so call'd to distinguish it from that made of Resin, &c. is a resinous Gum, which drops during the great Heats, without Incision, from the large Branches, and the Trunk of the *Lentisk*; and sometimes likewise, after having been cut, the Tears fall from the Tree into a Receiver set for that Purpose.

Chuse such as is in the largest Tears, and which, being chew'd, becomes like white Wax. The best is that of *Chio*, being larger and of a more balsamick Taste, than that which is brought to us from the *Levant*, by the Way of *Marseilles*, which is almost the only Sort they have in *France*. *Mastick* is much used in Physick, and, among other Things to ease the Tooth-ach, and is used to several other Purposes, as the making of Varnish, &c. The People of the *Levant-Trade* deal ill with us, particularly in mixing their *Mastick* so as the worst lies at the Bottom and the best at the Top; but they will not sell the one without the other.

Lentiscus,

Book 3.
of Woods.



Lentiscus, the *Lentisk*, is a Tree full of Branches, sometimes large and sometimes small, which are pliant, flexible, and cover'd with an Ash-colour'd Bark. The Leaves are like those of the Myrtle, ranged by Pairs on the Side, and at last terminate with a single Leaf, always green, of a strong Smell, but not at all disagreeable; of a smart, astringent Taste: There grow oftentimes upon the Leaves certain little Bags or Bladders, fill'd with a Liquor. The Flowers grow upon Stalks arising from the Leaves like Grapes, reddish in Colour, tending towards a Purple; from whence arises the Fruit, which are small round Berries, black when they are ripe, and of an acid Taste, in each of which is contain'd a little longish Kernel, hard and black, having a white or green Pith in it. The Wood is brought dry to us, and should be chose fresh, difficult to break, heavy, and not subject to be carious or spongy: It contains a great deal of Oil, Flegm, and likewise essential and fix'd Salt; is astringent and cordial, resists Poison, and is excellent to strengthen and preserve the Gums.

The *Refina Lentisci*, or *Mustick*, is produced from this Tree, growing in *Syria*, &c. and brought to us out of *Turky*, from *Smyrna* and *Aleppo*; but the best is from *Chio*, which is of a light Colour, or white yellow, clear, and almost transparent, free from Dross or Filth, in Grains, Tears, or Drops, and sweet-scented, bright, pure, and friable, being easily reduced to Powder: It is a Gum-Rosin, said, by some, to come from the same Tree with the *Chio Turpentine*. It is sometimes adulterated with Frankincense, and Rosin of the Pine-Tree; but the Smell will easily discover the Cheat. The green-colour'd, blue, and impure, are not good; and the black, like Bitumen, is nought. It is hot and dry, subastringent, and strengthens the Stomach and Head, and is chiefly used against Vomiting, Loathing, and Fluxes of the Bowels. It corrects sharp Purges, hinders Vapours arising from the Stomach, which hurt the Head, strengthens the Nerves, cures spitting of Blood, Coughs, Colds, Catarrhs, and a stinking Breath. By chewing, it draws away Flegm from the Brain, and is used in a Plaister to the Temples for the Tooth-ach; in a Cataplasin for the Stomach, and as a Dentrifice for the Teeth. Dose, a Dram or two Drams in Powder, for the *Fluor Albus*, or *Gonorrhœa*.

[The Tree is the *Lentiscus ex Chio ex qua fuit Mastiche*. Ind. Med. 73. *Lentiscus vera ex Moulda Chio cortice & foliis fuscis*. Cat. Hort. Ams. 192. It is common in the Island of *Chios*, it flowers in May and June; the Leaves are pinnated like the

Ash, and ever green; the Flowers stamincous, and growing at the Insertions of the Leaves. It is an Error to think this the same with the common *Lentisk*, or *Mustick-Tree*, as it is call'd.

The Wood comes over in slender knotty Pieces, but is seldom used now. The Resin or Mustich of the Shops is whitish when new, and grows yellower by Age. It is so much of the Turpentine Kind, as to deterge, and pass by Urine, as appears manifestly by its Scent.

6. Of Tamarisk.

THE *Tamarisk* is a Tree of a moderate Size, which grows plentifully in *Languedoc*, having very small Leaves, and the Fruit in Clusters, of a blackish Colour, which the Dyers use instead of Galls.

Chuse the *Tamarisk-Wood* with the Bark, white without and within, of almost an insipid Taste, and without any Smell. They use it for Diseases of the Spleen, and make little Casks, Cups and Dishes of it, which are call'd *Tamarisk Ware*. Those who are troubled with the Spleen, used to fill those little Casks with good Wine, and, after it has stood some Time, drink it for their common Liquor; and they use the Cups and Dishes for the same Purpose, to drink out of. From this Wood is made a white Crystal Salt, call'd *Tamarisk Salt*, which is appropriated to the Cure of the Spleen, which, to be in its greatest Perfection, ought to be dry, in small Crystals, and not in Powder, as it frequently is.

Tamariscus, *Tamarix major*, *five* *Arborea Narbonensis*, the greater *Tamarisk*, or *Narbone-Shrub*, is a Tree of a middle Size, whose Bark is rough, grey without, and reddish within: The Leaves are small, long, round, slender, very like those of Cypress, of a pale green Colour; the Flowers growing at the Top of the Branches, disposed in Clusters, little, white, and purplish, each one being composed of five Leaves, which is succeeded by a lanuginous Fruit, that contains blackish Seed. The Root is thick, woody, and divided into several Branches. This Tree grows chiefly in the hot Countries, as *Dauphiny* and *Languedoc*, near Rivers and watry Places. It flowers three Times a Year, in Spring, Summer, and Autumn. All the Parts of the *Tamarisk* contain a great deal of Salt and Oil. The Bark, Root, Leaves, and Flowers are all used in Physick, to open Obstructions of the Spleen and Mesentery, excite Womens Courses, and to attenuate the tartarous and melancholy Humours.

[This is the *Tamariscus Narbonensis*. Ger. Enal. 1378. *Tamariscus folio tenuiori*. Park.

1479. It is common in Gardens, and flowers in May and June; the Leaves are like those of the Cypress, or Heath, the Flowers grow in Spikes, and the Seeds are wrapp'd in Down. It is recommended for the Jaundice and *Fluor Albus*, and *Etmuller* equals it to the *Sassafras*; but it is now very little used.]

7. Of Sassafras.

Pomet. THE *Sassafras*, or *Cinnamon-Wood*, call'd *Pavaume* by the *Indians*, is a Tree very beautiful to the Eye, which grows plentifully along the Coasts of *Florida*, where there are entire Forests of it. This Tree has a very strait Trunk, on the Top of of which there are several Branches charg'd with green Leaves resembling those of the Fig, which the Inhabitants make use of bruis'd to cure Wounds withal.

Chuse your *Sassafras* with the Bark reddish, thick and rough, that being the best Part of the Tree, as well for its acrid Taste, as its strong aromack Smell, which considerably exceeds that of the Wood, especially when the Tree is standing. Upon this Account it was, that the first Time the *Spaniards* landed in *Florida*, they thought they had been Cinnamon-Trees, because of their aromack Smell, which they might smell two Leagues Distance; they soon found their Error in that, but judging, however, that it was not without some Virtue, they brought of it into *Spain*, and it soon got into Use.

Several People prefer the Bark of this Tree to the Trunk and the large Branches, and that not unreasonably, because it is much more fragrant than the Wood; it is commonly light, reddish without and within, easy to break, of a very strong aromack Smell and Taste; the Bark is better than the Root, and the Root better than the Wood. When they cut or rasp this Wood for Use, the Smell is so strong that it occasions the Head-ach in those that work upon it, as it likewise does in those that use it, which has much lessen'd its Credit.

Sassafras is a yellow fragrant Wood, *Lemery.* of a Taste something acrid and aromack, almost like that of Fennel. It is brought to us in large Pieces from *Florida*, *New Spain*, &c. where it grows, and where the *Indians* call it the *Palm-Tree*; and the *French* give it the Name of *Sassafras*, by which it is call'd by the *Spaniards* to this Day. The Fruit of this Tree is longish, wrinkled, and hangs by a long Footstalk; the Roots are extended along the Ground, bigger or less, according to the Size of the Tree, which is call'd *Sassafras*, by a Cor-

ruption from *Saxifrage*, which signifies that it has the same Virtues with *Saxifrage*, that is to say, it is incisive, penetrating, aperitive, sudorifick, and cardiack; it resists Poison, strengthens the Sight and the Brain, and is good in the Sciatica, Gout, Catarrhs, taken in Decoction or Infusion, by Way of a Tea, &c. It is the Opinion of some, that the *Sassafras*, call'd the *Ague-Tree*, is rather a Root than a Wood, brought out of the *West-Indies*, as *New Spain*, &c. It is of a pleasant Smell, and comes in pretty long Logs, as thick as ordinary Billets. The Bark is red without, and cuts of a Flesh-Colour within; its Taste is a little sharp, but aromack, abounding with much volatile Salt; from whence it is evident that it has great Virtues; the finest is to be chosen for Distillation, and must have its Rind about it, for that it possesses more of the ætherial Oil, and volatile Salt and Spirit, than the internal Substance of the Wood: It is a most admirable Sudorifick and Diuretick, never missing of its Effects by those two natural Ways of Evacuation; for if the Sick will not yield to Sweating, it often works off by Urine, being full of Spirit and Salt, and therefore is a great Specifick in all the aforementioned Cases; besides which, a strong Tincture, or the Chymical Oil, is commonly given to facilitate the Labour of Women in Travail, and to expel both Birth and After-birth; after which, it strengthens the Parts, and invigorates the Instruments of Generation. Dose from three Drops to ten or twelve.

[It is the *Arbor ex Florida ficulneo folio*, C. B. Pin. 431. *Arbor Sassafras Monardi*, Breyn. Prodr. 1. 18. *Sassafras*, Ger. Park. It grows in many Parts of *America*. It is very drying and hot, tho' not quite so much as the *Guaiacum*. It makes an agreeable Tea, and would be in great Use, but that the Scandal of its being good in Venereal Cases prevents many from using it.]

8. Of Guaiacum.

Pomet. THE *Guac*, *Guaiacum*, or *Lignum sanctum*, Holy Wood, grows plentifully both in the *East* and *West-Indies*, and is brought to us in large long Billets or Logs, some of which weigh four or five hundred Weight. This Tree is about the Height of our Walnut-Tree, bearing Leaves long or round, according to the different Species, which distinguishes the Tree to be Male or Female. After the Leaves, come Tufts of blue Flowers, in the Shape of Stars, furnish'd each with a little brown Husk, of the Size of a Hazel-Nut, in which is contain'd a little Fruit of an Orange-Colour.



the little Cedar



Cedar of Lebanon



the Small Juniper

10



the Great Juniper

It is the best Sort of Wood we have for Turnery-Ware, especially for making Bowls for the Bowling-Green, Mortars, Pestles, Rowling-Pins, &c. The Surgeons, and others, who use it in the Venereal Disease, chuse the Shavings or Raspings to make their Ptisans and fudorifick Drinks. There requires no other Care in the Choice of this Wood, but to see that it be clean, of a blackish brown Colour, resinous, heavy, hard and compact, and of a something acrid Taste, and such as has none of the pale outer Part of the Tree with it. There is made of this Wood, a Flegm, a Spirit, and black Oil, which is thick and foetid; and that which remains in the Bottom of the Retort is black as a Coal; but being made into a *Lixivium*, or a Lye, there is extracted thence a Salt. They make also a Resin and Extract of it, as they do of Jalap.

The Bark of the Tree is likewise of great Use in the Cure of the aforefaid Disease. Chuse the heaviest, hardest to break, grey without and whitish within, of a bitter and disagreeable Taste. We have brought from the *Indies* large Pieces of the Gum, so like to *Colophony*, that it is almost impossible to distinguish it, but by the burning it, whereby it will afford a sweet Scent; and, on the contrary, the *Colophony* will smell of Turpentine. It is one of the greatest Sudorificks we know at present.

Within some Years the Surgeons thought that the Wood of the Box-Tree, to which some have given the Name of *French Guaiacum*, had the same Virtues with the *Indian*, which made them use much less of the true *Guaiacum* than they had been used to do; but if they had been curious enough in the Choice of the right *Guaiacum*, they would have found a vast Difference. The Error arose from hence; they bought it of the Turners, who used to sell them the Sweepings of their Shops, in which it was mix'd with several other Woods, for a Penny or Three-Half-pence a Pound.

The Box-Wood [might indeed have as much Virtue as this.

This Box-Wood is well known in *France*, they make several Sorts of Work of it. The best of it comes from *Spain*, and some Parts of *France*, but chiefly *Champaigne*. A Spirit and black Oil is drawn from this by the Retort, and is rectify'd as that of *Guaiacum*.

Guaiacum, sive Lignum Sanctum, Lemery. is a Tree the Size of a common Walnut-Tree, whose Bark is thick and gummous, and easily parts from the Trunk. Its Wood is hard, firm, weighty, and marbled with brown, red and black; of an acrid Taste: The Leaves are longish, or almost round: The Flowers grow in Clusters, of a pale yellow Co-

lour, hanging upon green Stalks; these are succeeded by a Fruit like small Chestnuts, round, solid, and brown; in which is contain'd another little Fruit, or Seed, of an Orange-Colour. This Tree yields, by Incision, a resinous Gum, of a reddish brown, clean, shining, friable, fragrant, and of an acrid Taste, call'd *Gum Guaiacum*.

The Wood, Bark, and Gum, are all used in Physick; every one of which contains a great deal of essential as well as fixt Salt, Oil and Gum. They are esteem'd good Sudorificks, and are given in the Venereal Disease, Rheumatisms, Catarrhs, Gouts, Scurvy, and Dropsy, and other Diseases, which proceed from Weakness, Obstructions, or Diseases of the *Viscera*. It is a Wood which is white without, and of a greenish yellow, or bluish green sometimes within, the heaviest being the best. It is brought from *Jamaica*, and several Places of the *Spanish West-Indies*, in Pieces so large as to make Bowls of them, which hold from three to twenty Quarts.

[It is the Wood of the *Guaiacum, sive Lignum sanctum*, Park. 1586. *Guaiacum Americanum primum fructu Acris sive legitimum*, Breyn. Prodr. 1. 31. It is common in *Jamaica*, *St. Domingo*, and many other Places. The Leaves are alated; the Flowers blue and pentapetalous; the Fruit something like the Maple. Some Authors distinguish the *Lignum sanctum* from the *Guaiacum*, and say it is the Wood of the *Guaiacum foliis Lentisci*, Breyn. Prodr. 2. 54. and *Caspar Bauhine* has made three Species of it, 1. the *Guaiacum magna matrice*; 2. the *Guaiacum prope modum sine matrice*; 3. the *Guaiacum foliis Lentisci*; but Father *Plumier*, who was upon the Spot whence they are all brought to us, affirms they are all the Wood of one Tree in different Circumstances of Age, Place of Growth, &c.

The Wood was formerly famous for the Cure of the Venereal Disease; but it was found not to succeed so well in *Europe*, as in hotter Climates; but it is still kept in use in such Cases as an Assistent, in Diet-Drinks during Mercurial Courses.]

9. Of Cedar of Lebanon.

THE *Cedar of Lebanon* is a Tree which grows to a prodigious Size, *Pomet.* and of a pyramidal Figure, whose Branches are adorn'd with little, narrow, green Leaves, and the Fruit like our Pine-Apples. It is from the Trunk, and the large Branches of this Tree, that there flows, during the great Heats, without any Incision, a Sort of white Resin, very clear and transparent, which we call *Cedar-Gum*, of which the largest Trees yield not less than six Ounces

Ounces a Day. Here are likewise, during the hot Season, little Bladders form'd on the Body of this Tree by the scorching of the Sun ; which being pierc'd, afford a clear white Liquor, like Water, of a strong penetrating Smell ; and when the Tree produces nothing more naturally, they make Incisions in it, and there runs from them an unctuous Liquor, which drops as it runs down the Tree, and makes what we call Resin of the Cedar ; but this, as well as the other Productions of this Tree, are very scarce. This Resin is of a very fine yellow, bright and transparent, and of a very grateful Odour.

Of the Berry-bearing Cedar.

The *Berry-bearing Cedar* is a Tree of which there are three Kinds, differing only in Height, or in the Thickness of the Leaves ; they are commonly crooked, bearing long sharp-pointed Leaves, always green, especially in Winter ; after which come Berries of the Bigness of those of Butcher's Broom, or Kneec-Holm, green at first, but red when they are ripe. The Trunk being cut, there issues forth a very clear transparent Gum, which is the true Sandarac ; but as we very seldom have it among us, we use the great Juniper-Gum instead of it, which I shall describe hereafter.

They make of this Wood, by the Assistance of the Retort, a black Oil, which being rectified, is call'd Oil of Cedar, or Cade Oil ; but as these Trees are not very common, we content ourselves with that made of the Great and Lesser Juniper. The true Cade Oil, or Oil of Cedar, is admirable for curing Tetters and Scabs in Horses, Cattle, Sheep, and other Beasts : But as these Sorts of Oil are too dear, we substitute in their Place clear Oil of Pitch, which for that Reason is also call'd Cade Oil, as you will find in the Chapter of Pitch.

Cedrus Magna, sive Libani Conifera, Lemery. or, according to *Tournefort*, *Larix Orientalis, fructu rotundiore obtuso*, is a Species of the Larch Tree, or a very large, thick, strait Tree, rising Pyramidal, whose Bark is all of a Piece, the Wood very hard and durable, so that it is said never to decay ; the Leaves are small, strait and green, disposed in Clusters along the Branches, putting forth in Spring-time, and falling at the Approach of Winter ; the Flowers and Fruit as before describ'd. There runs a Sort of Gum from the Tree without Incision, hard, and as it were in Grains like Mastick, from whence it frequently is call'd the *Mastick-Cedar* ; the Wood is used in fine Joiners Work, and Turners Ware ; the Tear that flows from the

Tree, is improperly call'd a Gum, because it is the purest resinous Part of the Tree, and is digestive, deterfive, consolidating, strengthening, good against Gangrenes, and proper for Dislocations and Fractures.

There is another Sort of Cedar call'd *Cedrus Baccifera*, the Cedar that bears a Berry, or *Cedrus Minor*, the *Lesser Cedar*, of which there are three Kinds ; the first is call'd the *Phœnician Cedar*, or *Cedrus folio Cupressi major fructu flavescente*, the Great Cypress-leav'd Cedar, with the yellow Fruit ; the Trunk and Branches whereof are crooked and knotty, the Wood reddish, yielding a Smell like the Cypress ; the Leaves narrow and sharp-pointed, harder than those of Juniper and more prickly, green all the Year as the Cypress ; the Shells or Husks are made up of several little Scales, at the Bottom of which grow several Bags or membranous Vesicles, full of Dust ; the Fruit arises upon the same Foot or Stalks with the Husks, but divided into Cells, in which are Berries that turn yellow when ripe, are a little fleshy, odoriferous and of a grateful Taste ; each of them containing three woody Kernels that are hard, hollow on their Backs, and flat on the other Side ; there comes from the Trunk of the said Tree, in the hot Countries, a Gum call'd Varnish.

The second Sort is call'd the *Lycian Cedar*, or *Cedrus folio Cupressi media majoribus baccis*, the Middlemost Cypress-leav'd Cedar, with the great Berries ; this Tree differs from the former, in that it is lower, and the Berries are much bigger.

The third Sort is call'd, *Cedrus Hispanica procerior fructu maximo nigro*, the Tall Spanish Cedar, with the great black Fruit ; it is much higher than the rest, and the Berries a great deal bigger, of a black Colour : These Cedars grow in *Italy, Spain, Provence, and Languedoc* ; they remain always green, and yield Abundance of Oil ; the Wood is sudorifick, being used in Decoction ; the Berries are proper to strengthen the Stomach, and assist Digestion. The Oil is drawn after the common Method, by a Retort, being black, and passes for the true Oil of Cedar ; it is good for all Sorts of Scabs and Deafness, and may be inwardly given in Hysterick Cases. Dose from two Drops to fix.

[The first of these Trees is the *Cedrus Libani*, Ger. 1161. *Cedrus conifera foliis Laricis*, C. B. Pin. 490. It is kept in the Gardens of the Curious ; the Resin is very seldom to be met with, and its Virtues are not now known but by Conjecture ; the Wood is of a red Colour, something resinous, and of a strong agreeable Smell ; it is said never to decay ; it is sometimes used in Physick as a Sudorifick.

The

The *Berry-bearing Cedar* is the *Oxycedrus* of the Shops ; the original Species is the *Oxycedrus Lycia*, Ger. 1191. *Cedrus major Dioscoridis Clusii*, Pluk. Alm. 201. It is also kept in the Gardens of the Curious. The Wood and Berries both resemble the Juniper in Smell and Taste, as well as Virtues, but they are seldom used.]

10. Of the Great and Small Juniper.

Pomet. **T**HE Great Juniper, call'd in *Latin* *Juniperus*, is a Tree of different Sizes, according to the different Places where it grows ; this Tree is commonly slender, at a good Height of which spring forth several Branches, furnish'd with little, narrow, prickly Leaves, always green ; it bears also Berries of the Bigness of a Hazel Nut ; which the first Year are green, the second brown, the third black, and which being full ripe, are very alexipharmick.

By cutting the Trunk, and the largest Branches of this Tree, there flows a Gum call'd Sandarac, during the great Heats, which is brought to us from *Africk*, where the Trees grow very high, and in great Quantities. This Sandarac is the *Arabian Sandarac* or Varnish, which is much traded in by the *Swedes*, *Hamburgers* and *English* ; this is call'd by some the *Arabian Sandarac* ; by others, the *Varnish-Gum*, or *Gum-Juniper*, and is of more Use to Artists than in Physick. Chuse it in large white Drops, and not dusty.

Of the Small Juniper.

The small Kind of *Juniper* is so common every where, that it needs no Description ; there is made of the fresh and dried Berries, a white and fragrant Oil ; as likewise a Water or Spirit, vulgarly known by the Name of Geneva, as a Corruption from the *French Word Genevre* : Besides this, there is a Spirit and Oil drawn from the Wood, by the Retort ; which Oil is mention'd in the preceding Chapter. The Wood is usually burnt as well as the Berry, to drive away or expel infectious Air. The *Germans* use the Berry in their *Ragous*, and it serves them for the *Theriaca*, for which Reason an Extract of it is call'd *German-Treacle*. This *Juniper* likewise affords some Sandarac, but in such small Quantities that it is not worth the while to make it.

The Great *Juniper* is call'd *Juniperus Lemeryi*. *rus vulgaris celsior & arborescens*, the common high *Juniper-Tree*, or the *Spanish Juniper*, which is chiefly improv'd in *Africa*. M. *Tournefort* distinguishes this Tree from the Cedar by its Leaves, which are single and flat,

instead of those of the Cedar, which more resemble the Cypress. It is sudorifick in Decoctions, and fragrant when burnt ; to which Purpose it is frequently used in the Houses to prevent pestilential Diseases, and other Infections.

The other *Juniper* is a common Shrub, known to every Body, which is full of Oil and essential Salt ; it grows plentifully in some Parts of *England*, and in most Parts of *Europe* ; the Berries are cephalick, good for the Nerves and Stomach, to provoke Urine and the Terms, to resist Poison, for inveterate Coughs, Wind-Cholick, and nephritick Pains, together with the Strangury, Gravel, Sharpness of Urine, and all Obstructions of the urinary Passages, Womb, Liver, or Spleen. In *France* they make Comfits of them, which they call *St. Roch's Comfits*, and carry them in their Pockets, that they may chew two or three of them in a Morning, to prevent infectious Airs, and make the Breath sweet.

[The small or common *Juniper* is the *Juniperus vulgaris fructuosa*, C. B. Pin. 488. *Juniperus vulgaris baccis parvis purpureis*, J. B. 1. 293. It is common on Heaths.

The Great *Juniper*, or *Juniperus major* of the Shops, is the *Juniperus maxima Heyrica*, Park. 1029. *Juniperus major bacca cærulea*, C. B. Pin. 498. this is most common in *Greece*. There is also another Species used in Medicine, which is the *Juniperus Alpina*, J. B. 1. 301. *Juniperus minor montana folio latiore fructu longiore*, C. B. Pin. 489. The principal Use of this Species is, that its Infusion or Juice are given to Horses, to destroy the Worms call'd Bots, with good Success.]

11. Of Brasil Wood.

WE sell to the Dyers several Sorts of red Woods, by the Name of *Brasil-Wood* ; the first that is most esteem'd, and most in Use, is the *Brasil-Wood* call'd *Fernambuck*, because it is brought from a Place of that Name in *Brasil* ; the next is the *Brasil-Wood* of *Japan*, which the *English* and *Dutch* call *Sapan-Wood*, of which there are two Sorts ; to wit, the large *Sapan-Wood*, or the great *Brasil-Wood* of *Sapan*, and the less the *Brasil-Wood* of *Japan*, or the *Biames Sapan*, which is much smaller : The third Sort is the *Lamon Brasil* ; the fourth is the *Brasil* of *St. Martha* ; the fifth, and much the least, is the little *Brasil-Wood* that comes from the *Antilles* ; so that that which makes so many different Kinds of *Brasil-Wood*, is nothing else but the several Places and Difference of the Soil where the Wood grows.

The

The Tree from whence this Wood is cut, is very thick and large, having long Branches that bear a vast Quantity of little Leaves, roundish, of a fine shining green, among which come Flowers, like the Lilly of the Valley, of a beautiful red, and a sweet Flavour, from whence comes a flat Fruit, in which are enclosed two flat Kernels, of the same Shape and Figure as the Gourd Seed.

The Natives prepare the Wood, which is brought to us, by cutting it close with the Ground, and branching or lopping of it, and taking away the outer Part; so that what remains is only of the Size of a Man's Leg, tho' the Tree was of the Thickness of a Man's Body. Chuse the true *Fernambuck Brasil* in heavy Billets or Logs, compact, and without Pith, found and firm; that is to say, without the outer Substance and Rottenness; such as, after it is shiver'd in Pieces, shews of a reddish Colour, and being chew'd, is of a sweet Taste; but take care that it be not mix'd with other Kinds of *Brasil*, which is easily known, in that all other Sorts, except the *Japan*, are without Pith; and that of *Lamon* may be distinguish'd from the *Fernambuck*, in that it is in large Billets. Some Persons have assur'd me, that the *Brasil* of *Lamon* comes from *All-Saints-Bay*, where it grows in great Quantities. As to the *Brasil* in Chips, the best Account I can give you of it, is to trust to the Honesty of the Merchant with whom you deal. This Wood is used among the Dyers, and the Stationers make Red-Ink thereof. There is a very red Tincture made of the *Fernambuck Brasil*, of which I have been assur'd a Carmine is made as from *Cochineal*, but I never try'd it. Likewise there is a Liquid Lake made of this, which the Painters use for Miniature.

This Wood is call'd *Lignum Brasili-Lemery*. *anum rubrum*; the Tree from whence it comes, by the *Indians* is nam'd *Ibirapitanga*; the Bark is reddish and thorny, the Branches are long, and adorn'd with abundance of small Leaves like the Bramble; the Flowers are little and join'd several of them together, very odoriferous, and of a fine red Colour: This Tree grows in the Woods, and the best Kind is the *Fernambuck*, which is brought us from a Town of *Brasil*, of that Name. Chuse the heaviest, firmest, foundest, reddest, and that which affords the sweetest Smell.

There are several Sorts of this Wood, the principal Use of all which is for the Dyers; it contains a great deal of Oil, and a little essential Salt; is astringent, and the Tincture proper to strengthen the Stomach, abate a feverish Heat, and remove the Inflammation of the Eyes: The Wood boil'd in Water, with a little Allum, will

strike a red Dye into Eggs boil'd with it; and it is used to colour Roots of *Althea* to clean the Teeth withal. Some Authors affirm it to be of great Use against the French-Pox; but I find it seldom or never prescrib'd for that Purpose; for tho' it may be drying, it has nothing of the acrid, hot Quality of the *Guaiacum*, neither does it abound with Rosin like that Wood: According to the following Prescription, you will have a Tincture for the dying of Skins, Book-Covers, and the like Things, and to write withal, as Red-Ink: The Tincture prepar'd with Water, only serves for dying of Wooll, which will not turn purple, nor suffer an easy Decay. The Tincture is thus made; take Rasplings of *Brasil*, and, instead of Water, infuse them in Vinegar, or some Lixivium, with a little Gum-Arabick and Allum, setting them in a glazed Pot, or Pipkin, for some Hours, you will have a Blood-red Tincture.

[This is the Wood of the *Erythroxylum Brasilianum Spinosum foliis Acaciæ*, Herm. Par. Bat. Pr. 333. *Crista pavonis Coronillæ folio, tertia, five Tinctoria, maxima, Brasiliiana, flore variegato, parvo odoratissimo, siliqua aculeata, Lignum Brasiliium dictum ferens*, Breyn. Pr. 2. 37. It grows all over *Brasil*, and flowers in *December*; the Heart of the Wood is what ought to be used. It is said to have the same Virtue with the Red Sanders, but is little used in Medicine.]

12. Of Log-Wood, or Campeachy-Wood.

THE *Log-Wood*, call'd *Indian-Wood*, *Campeachy*, or *Jamaica-Wood*, is *Pomet.* the Heart of the Trunk of a large Tree, which grows plentifully in the two Islands aforesaid, and in *Santa Cruce* in *America*, where there are whole Forests of it.

This Tree is bigger or less, according to the Soil that produces it; it rises with a Trunk, very thick and strait, cover'd with a thin Bark that is plain and smooth, of a Silver-grey, or yellowish Colour; the Leaves are like those of the Bay, and being held in the Mouth, afford a Scent like the Clove, which has made it oftener taken for the Tree that bears the Clove than any other, by Reason of the delicate Flavour, which has given it the Name of the *Indian aromatick Laurel*: Among the Leaves comes a small Fruit, which adheres to the Branch by a little Stalk like the Cubebs, and has at the other End a small Crown; the Fruit is of a dun Colour, the Taste sharp and piquant, notwithstanding it is agreeable enough, tasting like a Clove, which occasions it for the most

Part



Cinamon



Wild Cinamon

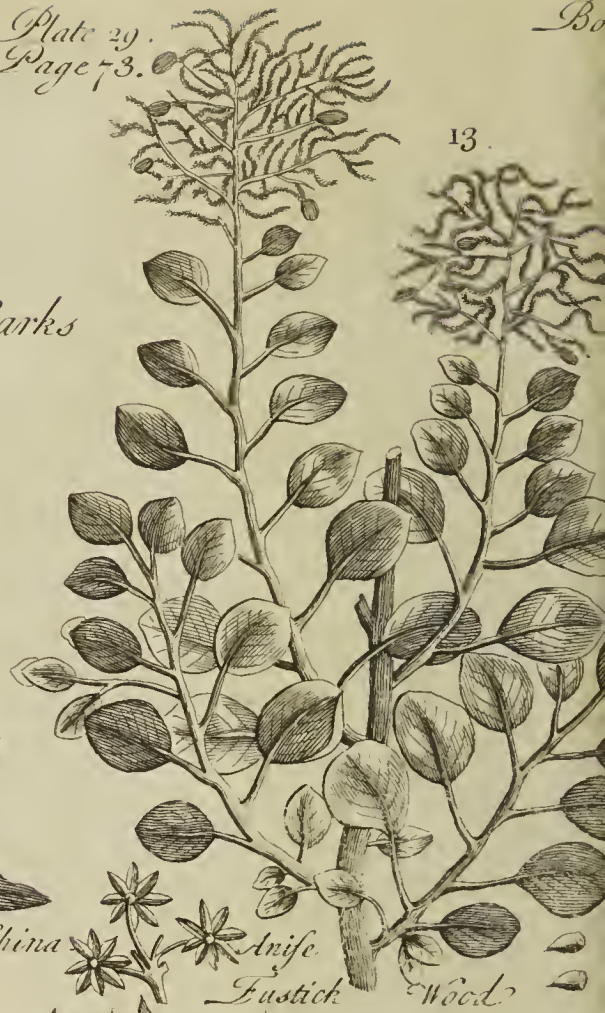


White Cinamon



Clove Cinamon

of Barks



13

Part to be call'd Clove-Berry ; the Fruit being broken, there are found within three small Kernels very nearly resembling Musk-Seed.

We may observe then, that the *Indian Laurel*, or *Campeachy-Tree*, affords three Sorts of Commodities that are very good and saleable ; the first is the Wood, which ought to be chosen true *Campeachy*, cut by the *Spaniards*, as that is the best Kind, such as is not decay'd, and cut, not saw'd at the Ends, which distinguishes it from that of *Jamaica*, which is commonly saw'd, and is brought by the Way of *England*, and coming from *Campeachy* or *Jamaica*, is carried to *France* ; this Wood chiefly employs the Dyers, Bead-makers, and others, who use it to dye blue and black. The second Commodity this Tree affords is the Leaf, which may be used in the Place of the *Malabathrum* wherever it is order'd, as this Leaf has more Virtues than it ; the *Americans* make use of them for Fomentations, to cure the Palsy, and other Diseases proceeding from cold Causes. The third is the Fruit, which the *French* use in Imitation of the *English*, as being a very strong aromack, and proper upon several Occasions : As this has been known but of late Years, the *French* have had but little Commerce therein, besides what their Privateers of *St. Maloes* have taken from *England* : The Grocers distinguish it by the Name of Clove-Berry, because of its Resemblance to that Spice in Smell and Taste, and it is call'd with us All-Spice, as having an Analogy to Cinnamon, Cloves, Mace, and Nutmegs, and is very much used in all Sauces. By the *English* it is call'd *Jamaica-Pepper*, by the *Dutch*, *Anomum*, and by the *French*, the Fruit of the *Indian-Wood*, and vulgarly, though improperly, the Clove-Berry. The Flowers of this Tree are said to be very beautiful.

Lignum Indicum, *Campecium*, *Log-Lemery*. Wood, or *Jamaica-Wood*, call'd also *Brasiletto*, comes from *Campeachy* and *Jamaica*, where it is chiefly found growing ; but it grows in several other Parts of the *West-Indies* in the *Spanish* Territories, the Isles of *Providence*, and the like ; where, besides the Wood, the main Produce is the Pepper, or Fruit of the Tree, call'd *Pimento*. What the *English* use comes in great Plenty from *Jamaica* ; it is small, round and blackish, almost like common Pepper, but of a more fragrant Smell, and much more aromack Taste ; when one chews it in the Mouth, it is hot, and the Flavour is as if you had all the other Spices in your Mouth at once, as Cinnamon, Cloves, Mace and Nutmegs, being strong, and of an odoriferous Smell, and without doubt possesses all their several Properties, Qualities and Virtues, tho' possibly not in so large a Measure,

in Respect to its Body ; for that it consists of much more earthly Parts than any of them, Cinnamon only excepted ; but the Tincture, or Oil of it, being extracted from its terrene or feculent Part, with which it holds but a small Proportion in Respect of the four Spices ; they are not much inferior to what may be extracted from those generous Drugs : So that in short we must allow this Spice to be stomachick, cephalick, cardiac, uterine, nephritick and arthritick ; it is alexipharmick and diuretick, comforts the Brain and nervous Parts, refreshes and strengthens the whole Animal Œconomy, and restores the natural Functions of Life, where weaken'd or decay'd. It is given in Powder, Decoction or Tincture, against Diseases of the Reins, Liver, Spleen and Womb ; and is very profitable in Gout or Stone, eight or ten Drops of the Tincture, made with Spirit of Wine tartariz'd, being taken three or four Times a Day, in any Cordial Water or Wine. The foetid Oil, made by the Retort, is good outwardly applied to Gangrenes, Tooth-Ach, and the like.

[The *Log-Wood* is the Wood of the *Crista Pavonis Coronillæ folio secunda sive Tinctoria Indica, flore luteo racemoso minore, siliqua latissima glabra Lignum rubrum Sappan dictum ferens*, Breyn. Prodr. 2. 37. *Erythroxylum sive Lignum rubrum indicum Spinossissimum Coluteæ foliis floribus luteis, siliquis maximis*, Par. Bat. Prodr. 333. It is a Native of both the *Indies* ; the Wood is used in dying, and sometimes in Physick, being accounted an Astringent : This Tree does not grow in *Jamaica*, but upon the Coast of the Bay of *Campeachy*.

These Authors are mistaken in thinking the *Pimenta* the Fruit of this Tree ; the Tree which bears that Spice is the *Myrtus arborca foliis Laurinis Aromatica*, Cat. Jamaic. P. 161. which is very common over the whole Island of *Jamaica*. For a full Account of this Spice, see the Appendix.

13. Of Fustick-Wood.

THE Wood we commonly call by this Name, is the Roots and Pomet. Trunk of a Shrub, which Botanists call *Coggigria* from *Theophrastus*, and *Cotinus* from *Pliny*, which has green Leaves almost round ; after which grows a Flower, which at first is made in the Nature of a Cluster, of a dark green Colour, and which at last opens itself into the Shape of a Fan, among the Down of which are black heart-fashion'd Seeds. The Roots and Trunk of this Shrub are what the People of *Provence* and *Italy*, after they have peel'd off the Bark, sell

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for

for *Fustick-Wood*, which, according to its good yellow Colour, is supposed to be the better Commodity ; that of *Provence* excels the *Italian* ; but there is a better Sort comes from *Holland* and *England* than either of the other two. The Use of it is for the Dyers, to make a dead Green, and it is of some small Account among the Workers in Ebony and the Carriers.

This Wood is call'd by M. *Tournefort*, *Cotinus Coriaria*, *Coccigria* by *Theophrastus*, and *Coggigria* by *Pliny*. It is a Shrub of six or seven Feet high, bearing its Branches round, cover'd with a dark red Bark ; the Leaves are large, veiny, almost round like the Elm, but much less, smooth, and green ; the Flowers grow on the Tops of the Boughs in Clusters, of a dark Colour, inclining to Purple. This Shrub grows on the Mountains in *Italy*, *Hungary*, and *Provence*. The Wood is yellow, and used by the Dyers and Leather-dressers ; the Leaves and Seeds are very astringent and cooling, drying and vulnerary, and may be used in Gargles for Ulcers in the Mouth, Throat, and other Parts, and for the Tooth-Ach. A Salt made of the Ashes of the Wood, makes an excellent Purge with two Drams of Treacle of Mithridate, and ten Grains of the Salt ; this may be given three or four Days successively, as the Disease requires, and is said to have such sufficient Virtue to give Relief in the Gout and Rheumatism, as is not to be found in any other Medicine whatsoever, laxative, purgative, or expulsive. Make the Salt thus ; take what Quantity of the Wood you please, burn it to Ashes, and with Fumitory Water, or any other proper Vehicle, make a *Lixivium*, or Lye ; filtrate this, and then coagulate it into a Salt, according to the usual Form.

In Surgery you may use the Salt thus : If the Wound or Sore you would dress be open, first cleanse by this Salt, then anoint it twice every Day with the Balsam or Gum of this Wood, made as that of *Guaiacum*, 'till the Cure is perfected. If there be great Pain in any Part of the Body, and nothing to be seen, anoint the Place with this Gum. By this Gum may be cur'd the Gout, the Palsy, and the *French* Disease.

[*Fustick-Wood* is the Wood of the *Morus fructu viridi Ligno Sulphureo Tinctoria*, *Sl. Cat. Jam. Tateci iba Pis. 163*. The Tree here described by *Pomet*, and which he thought produced the *Fustick*, is the *Cotinus Mathioli*, *C. B. Pin. 415*. *Coccigria Cotinus coriaria nonnullis dicta*, *Chabr. 37*. It is common in *Italy* ; it flowers in *May* and *June* ; the Fruit is esteem'd drying and astringent, but now never used in Medicine.]

There comes another Sort of yellow Wood from *England* and *Holland*, in thick Billets, which

is known by no other Name than that of the Yellow Wood, which serves the Dyers and the Workers in Ebony. I know nothing further touching this Yellow Wood, than what I have here related ; but that it ought to be chosen of the highest Colour that may be, and the Buyer must take care that he has not *Fustick* sold him for it. There comes also a certain Wood from *Lorrain* of a greyish Colour, tending something to reddish, hard and moderately heavy, furnish'd with a Bark that is thin, and a little resembling the Cherry-Tree, which is what we call *St. Lucy's Wood* ; and which, because of its agreeable Scent, is used by the Workers in Ebony. The Choice of this Wood is from its being firm, and without Knots. This Wood is admirable in its own Nature, in that it is not subject to decay, and the older it is, the better it smells. M. *Tournefort* assured me, that this Wood was the Stem of the Shrub which bears the *Mahaleb*, of which I made mention in the first Book of Seeds.

There is also brought from the *Indies* a certain greenish Wood in thick Billets, of a very good Smell, by the Name of *Calambourg-Wood*, serving for a great many Sorts of Works, by Reason of its sweet Scent, which is proper for several Kinds, as also for inlaying and making of Beads ; the Barbers use it as *Rhodium*, boiling it in the Water with which they shave.

The *Dutch* transport two Sorts of purple or Violet-colour'd Wood in large Billets, which is of no other Use but for inlaying. The Choice of this Wood is to pick such as is the most veiny, or marbled within and without, the least spotted or decay'd that can be met withal, and freest from the outward Substance ; the largest Violet-Wood is call'd *Palixandre-Wood*. There is another Sort the *Dutch* transport, of a reddish Colour, tending to a Purple, which the *Dutch* call *Letter-Hout*, and the *French* *China-Wood*. M. *Furetiere* says, that this Wood only comes from the Continent of *Guinea*, which I do not understand, having never seen any. But this is likewise for inlaying.

Besides these Sorts of Wood mention'd before, there are three Sorts of Ebony, to wit, the black, which the *Dutch* bring from the Island of *St. Maurice*, which the Antients believ'd to be a Species of *Lignum Aloes* ; the second is the red Ebony ; the third is the green Ebony. As to the Tree that produces the black Ebony, some affirm that is the Height and Size of the Oak, and that it is like that Wood both in the outer Substance and the Heart, except that the Colour is blacker, and takes a fine Polish or Smoothness, which makes it valued. It is said the Leaves resemble the Laurel, and that it bears a Fruit like an

Acorn,

Acorn, upon a little Stalk. The red Ebony is likewise very solid and heavy, being more veined and of a higher Colour. The green has the same Qualities when freed from the Bark and outer Substance.

The Use of Ebony is for several Kinds of inlaying, and because of the great Use it was of formerly, those who work upon Ebony are call'd at this Time Ebonists, who are in *France* a very considerable Body of Work-Men. There are those who affirm that the outer Substance of the Ebony, infused in Water, has a purgative Quality, which will cure the Venereal Disease.

Besides this, there comes from the *Indies* a greyish Wood in large Billets, of an Aniseed Smell; for which Reason it is call'd by the Ebonists, or Cabinet-makers, who work in it, Anise-Wood, or Anil-Wood. There is another Wood sold with the Seed thereof, nam'd Anise of *China*, *Siberia*, or the *Philippine* Isles, or the *Badean* or the Zinge-Seed, &c. describ'd under the Head of *Nigella Romana*, by the Name of *China Anise*. There are also brought to us two Sorts of the Cashew-Wood, the red and the white; the Tree is said to bear Leaves like the Oak; the Wood is light and spongy.

The *Tacamahac-Wood* is the Wood of a great Tree common in *New Spain*, which produces the Gum *Tacamahac*, to be spoke of in its proper Place.

There are yet several Sorts of Wood, as *Sambarama-Wood*, which is a Kind of white Sanders; *Molucca-Wood*, which the Natives of the Country call *Panava*; and many others which I shall

forbear to mention, we having little Trade or Sale for them. As to the *Molucca-Wood*, some have assur'd me that it was the white Cinnamon, which I have no Faith to believe.

[As these Woods are not used in Medicine, a particular Account of the Trees which produce them I judg'd would be foreign to the Intent of this Work.]

14. Of Snake-Wood.

THE *Snake-Wood* Plant is a Creeper which spreads itself a great Way; the Branches are slender and full of Leaves, like those of *Briony*, and fasten themselves to the Trees that are near them; the Wood is firm, heavy and compact, and cover'd with a thin Rind, reddish or of a marbled brown, without Smell, and of an insipid Taste; it is brought to us in long Pieces, of the Thickness of a Child's Arm; it grows in the Islands of *Ceylon* and *Timor*. Chuse such as is the oldest you can find. It is deterfivè, deficative, and good in Intermitting Fevers.

[This is not properly a Wood, it is the Root of the *Nux Vomica minor Moluccana*, *Lignum Colubrinum Officinarum*, Par. Bat. Prod. 357. *Radix Colubrina Lignum Colubrinum*, Mont. Ex. 7. It is of a very bitter Taste, and is a strong Purgative and Emetick, taken in Infusion from a Scruple to a Dram, and in Substance from ten Grains to a Scruple; but its Operation is observ'd to be much more violent upon the *Europeans* than on the *Indians*, with whom it is a common Medicine for the Worms.]

The End of the Book of WOODS.

BOOK the Fourth.

Of BARKS.

P R E F A C E.

B*Y the Word Bark I mean the first, second, or third Covering, or Rind of the Trunk of a Tree ; which we use, either as it is taken naturally from the Vegetable, as the Cortex, or Peruvian Bark, and the Bark of the Mandrake ; or cleansed, or freed from the first outward Rind, as Cinnamon, Cassia Lignea, and others of the like Nature. I shall begin this Book with the Tree that bears the Cinnamon, as well because of the great Consumption that is made of that Bark, as for the considerable Virtues with which it is endowed,*

I. Of Cinnamon.

WHAT the Antients, as well as the Moderns, call *Cinnamon*, is the middle Bark of the Branches of a Tree which grows the Height of a Willow, and whose Leaves are so like the *Folium Indum*, that it is difficult to find the Difference at first Sight, which has given ground to some People to assert, that the *Folium Indum* was the Leaf of the Tree that bears the *Cinnamon* ; but if the Leaves are so like, that the Eye cannot readily distinguish them, the Palate can do it with Ease, because the Leaves of the *Cinnamon* are of so sweet a Taste and Smell, that they surpass, in some measure, the *Cinnamon*. After the Leaves, arise white Flowers, in Form of little Cups, from whence come Berries, of the Figure of an Olive-Stone ; each of which adheres to the Branch, as is represented by the Cut engrav'd from the Original, which M. *Tournefort* has in his Hands, of which he gave me, at the same Time, five or six Leaves, of the Shape and Taste here taken notice of.

As to the Place from whence the *Cinnamon* comes, and the Manner of Barking the Tree, I think it proper to relate what Mr. *Tavernier* has writ of it. The *Cinnamon* comes from the Isle of *Ceylon* in the *East-Indies* ; the Tree that bears

it is very like our Willow, and has three Barks, or Rinds ; but the first and second, or middlemost Bark, are chosen for Use, and the third they never meddle with. This *Cinnamon* costs the *Dutch* more than can be believ'd, for the King of *Ceylon*, otherwise call'd King of *Candy*, from the Name of the Capital City, is a sworn Enemy to the *Hollanders* ; so that every Year they are oblig'd to set a Guard of five or six hundred Men to cover and defend the Labourers, during the Season for barking the *Cinnamon-Trees*, and entertain these Workmen all the rest of the Year, without reckoning the several Garrisons they are forc'd to maintain throughout the whole Island. These great Charges enhance much the Price of *Cinnamon*.

When the Inhabitants of the Island gather their Crop of *Cinnamon*, they free it from the outward Bark, which is brown and rough ; then they lay it to dry, and roll it up : By this Means it acquires the Figure we see it in, and becomes of a reddish Colour, being of a sweet Smell, and piquant Taste, aromack, and very agreeable ; therefore chuse such, together with the thinnest Bark, and of the highest or deepest red Colour that you can get, throwing aside such as is thick, or has little Taste or Smell. As to those who buy great Quantities, let them take care that they do not purchase *Cinnamon* that has had the Oil or Essence drawn

drawn from it, which is very difficult to know, unless you taste it Piece by Piece.

Cinnamon is of such great Use, that we have few Drugs which we use so much, as well because of its Virtues, as from its agreeable Taste and Smell. The *Dutch* bring us another Sort of *Cinnamon*, with a large Bark, and very thick, which is that the Antients, from the *Arabians*, call'd *Dracheni*, and we, *Rough Cinnamon*. This *Cinnamon* is the Bark of the Trunk and large Branches of the Tree bearing the *Cinnamon*; but as it is a Merchandize or Commodity of little Value, because there is no Sale for it, being without Taste and Smell, except it be here and there a Piece of it, which has a little thin Membrane within it of so piercing and aromattick a Taste, that it is almost impossible to bear it in the Mouth any Time; but there is so little of this to be found among it, that it is scarce worth speaking of. The Confectioners, after infusing the fine *Cinnamon* in warm Water, cover it with Pearl Sugar, and sell it by the Name of *Milan Cinnamon*. The *French* likewise make little Pastilles of *Cinnamon* and Sugar, which, with the Mucilage of Gum-*Tragacanth*, they make into a Paste. The *Dutch*, and the Natives of *Ceylon*, make a Confection of fresh *Cinnamon* taken from the Tree, which is an excellent Sweetmeat to carry to Sea, but very rare to be met withal in these Parts of the World.

2. Of Oil of Cinnamon.

BY Means of a proper Menstruum, and an Alembick, there is made, from fine *Cinnamon*, a rich, clear, and reddish Oil, of a very strong piquant Taste, which it is almost impossible to bear upon the Tongue; nevertheless its Taste and agreeable Smell is the Reason that most People covet it. As *Cinnamon* is a Bark which has very little Oil in it, we are forc'd to have Recourse to the *Hollanders* for it. It is an Error, however, to think they keep a better Kind of *Cinnamon* for their own Use, and to draw the Oil from, than they sell to us; the *Cinnamon* is the same, and different Manner of managing it is the only Reason they have more Oil from it than we can get: They take what Quantity of *Cinnamon* they please; infuse it twenty-four Hours in cold Water, then taking it out, put fresh in, continuing this so long till the Water becomes ting'd of a beautiful red; they then put it into a large Copper Alembick, and add thereto a proportionable Quantity of Spirit of Wine, which has the Property to separate the Oil from the Water, and make it rise to the Top of the Vessel; so that one Pound of *Cinnamon* shall be able to produce near the Quantity of an Ounce of Oil, which is very different

from what we can do here; for Mr. *Lemery* affirms, that four Pounds of good *Cinnamon* will, with Difficulty, produce six Drams of Oil.

It is rare that the *Hollanders* sell the Oil of *Cinnamon* genuine and natural as it is made, but mix it with Spirit of Wine, well deflegmated, and drawn over upon Salt of Tartar; which has given a Handle to several Chymists and Druggists to do the same; so that those who buy an Ounce of this Oil, have not above half an Ounce for their Money; which is of great Consequence, not only as it is a valuable Commodity, but as it is one of the best Medicines; tho' the Cheat is easy to discover two Ways; the first is, when looking into the Bottle in which it is contain'd, you may observe the Humidity that is within: The second is, by dipping the Point of your Knife in, and putting it into the Candle; if there is any Mixture of the Spirit of Wine, it will take fire presently; but, on the contrary to that, when it is pure, it will do nothing but smoke. And this pure Oil is what we call, with just Reason, Essence, Quintessence, or Oil of *Cinnamon*, which is proper to all its Intentions, and excels all other Preparations of the Bark. This Oil and the Bark itself are the greatest Cordial we have; for which Reason the *Dutch*, the *English*, and the *Germans*, as well as the *French* and *Italians*, use such great Quantities of it.

Besides the Oil, there is made a Sort of *Cinnamon-Water*, in which the Oil plentifully abounds. This is distill'd from White-Wine, Rose, or Balm-Water, or, instead of Wine, *Aqua Vita*, or Spirit of Wine and *Cinnamon*; from which, by a Glass Alembick, in a Sand-Heat, or *Balneo*, a muddy Liquor is drawn, like Milk, which, after a little Time, clears up again, and looks like Spring-Water: That which makes the Water look thick when it is new, is the Oil, which is rarified in the Water, so that it becomes imperceptible in that Form; but when the Liquor separates, and becomes clear, the Oil precipitates to the Bottom of the Liquor, and remains in Form of a little Ball. This *Cinnamon-Water* is very useful to give Women in Labour, in that it is an excellent Corroborative, strengthens the Stomach, and assists Evacuations. It is also prevalent in resisting the Malignancy of the Air, and pestilential Vapours, and to re-establish the natural Heat of the animal Life. The Dose is from half an Ounce to an Ounce.

Some make Pastilles with *Cinnamon-Water* and Sugar, which formerly were call'd *Oleo-Saccharum*; but those are not so good as what are made with Oil of *Cinnamon*. At *Montpellier* they make a Syrup of *Cinnamon*, from a strong Infusion of it and Sugar, brought to a due Consistence,

sistence, and aromatiz'd with a few Drops of the essential Oil. We sell a Tincture of *Cinnamon*, whose Virtue is encreased by several other Aromaticks, as Cloves, Mace, Long Pepper, Galangal, Ginger, Coriander, Musk, and Ambergrease, all grossly powder'd and put into a Bottle, with Brandy or Spirit of Wine, and set in the Sun during the hot Days; and this is what we sell by the Name of red *Hypocras*. There is likewise a white *Hypocras*, made almost the same Way, only it is distill'd to discharge the Colour; they may both of them be mix'd in Wine, sweeten'd according to the Palate of the Drinker. This is a mighty Cordial in use at *Montpellier*, and the Southern Parts of *France*.

3. Of *Cassia lignea*.

THE *Cassia lignea* is also a second Bark of the Trunk and Branches of certain Trees, very like those which produce the Cinnamon. These Trees grow in the Isle of *Ceylon* here and there, intermix'd with those Trees that bear the Cinnamon. It is the same as to *Cassia lignea* as it is in Cinnamon, that is, the finer or purer the Bark is, the higher colour'd, the sweeter tasted, and the more biting and aromatick it is, the more it is esteem'd; nevertheless, be the *Cassia lignea* ever so good, there is a great Difference betwixt the one and the other, the *Cassia lignea* leaving a Viscosity in the Mouth, which we do not meet with in the Cinnamon. It is of little or no Use in Physick, only that it enters into the Composition of the great Treacle, and there would be but a small Quantity of it sold, but that it is frequently imposed upon the unskilful Buyer for true Cinnamon, tho' a Pound of that be worth more than four of the *Cassia*, and the *Cassia* has not its Virtues. An Oil is drawn from it as from Cinnamon, and used in the same Cases. There are several Kinds of this Bark; as first, the true or Quill Sort, and 2dly, the *Tramboon*, brought from the *East-Indies*. The true is that which is the best for medicinal Uses, and is of the Quill Sort, being of the Thickness of a Goose-Quill, made up into small Bundles, generally ten or fourteen Inches long, of a bright Cinnamon Colour, and much of the Taste, but not so biting upon the Tongue, when chew'd. The *Tramboon* is of three Sorts; First, the small, like small Cinnamon, and something of the same Taste, but not so strong, being more earthy and woody, and of a worse Colour. 2dly, The Bundle Sort, bound up in Bundles like Clove-Bark, of a very hot biting Taste, but breaking more blackish within, and, as it were, gummy. 3dly, The thick Sort, almost like the last, in Rolls as thick

as a Man's Thigh, which is also strong, but of a very dark Colour. *Cassia lignea* differs from Cinnamon, in that it is weaker, darker colour'd, and, when chew'd in the Mouth, more glutinous, dry, and harsh; whence it appears that the *Cassia lignea* Tree, and that of the Cinnamon, are two different Trees. The Difference of the Colours in the *Tramboon Cassia* may be supposed to arise from its Preparation when taken off the Tree, being dry'd in the Sun; when it is less dry'd than it should be, it is of a paler Colour; and, when too much burnt with the Sun, it grows, as it were, black.

Cinnamomum, seu *Cannella*, in *Engl. Lemery*. lish *Cinnamon*, is a thin Bark, that is smooth, and roll'd in long Pipes, of a russet Colour, or yellowish, inclining to red; of a sweet Smell and Taste, piquant, fragrant, and very aromatick: It is taken from the Branches of a Tree about the Height of our Willow, which bears a Leaf shaped like the *Indian Leaf* we call *Malabathrum*, which smells and tastes like the Cinnamon. The Flowers grow in little Cups, white and odoriferous, succeeded by a Fruit that is of the Shape and Size of a small Olive, green at first, but growing black as it ripens. This Tree grows in the Isle of *Ceylon*, which is in the meridional Part of *India*; and the Wood is without Smell or Taste. The principal Virtue lies in the Bark, which, when fresh, is greyish without, and yellowish within: When it is separated from the Tree, it easily divides into two Barks, and they keep the inner Bark as the most valuable, which they dry in the Sun, and roll it up just as we have it come to us. This has little or no Smell or Taste when taken from the Tree, but acquires both afterwards; take Care of such as has been dry'd in too scorching a Sun, for that will be blackish, a great deal of the volatile and essential Parts being evaporated: On the other Hand, if it has been dry'd in too moist a Season, it will have a grey Colour, and not have half its Virtue, because the volatile Salts are not sufficiently exalted: But chuse such as is the finest thin Bark, of the highest Colour, a gratefull Smell, and biting Taste. When they have bark'd the Cinnamon-Tree, if they let it alone for three Years together, it will produce another Bark as good as the former. This Cinnamon yields a great deal of exalted essential Oil and volatile Salt; therefore it is proper for the Head, Brain, and Nerves, to fortify the Vitals, comfort the Heart, assist the Stomach, expel Wind, help Digestion, strengthen the Womb, open Obstructions, and provoke the Terms: It is the greatest Restorative in Nature, and an excellent Antidote against Poison, Plague, and any malignant Diseases.

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The best Preparation of it is the essential Oil, of which, if genuine, two Drops given upon a Lump of fine Sugar, or in a spirituous Vehicle, will revive the Spirits to a Miracle. It is good in Powder, Decoctions, Tinctures, Cordial Waters, &c. from half a Dram to a Dram in Powder, and from that to an Ounce or two in Decoction, Tincture, or Water.

That Cinnamon which is ill colour'd, and of no Taste, is worth nothing; therefore in buying it, you ought to bite, chew, and taste every particular Stick, that you be not deceived; for that without Taste, has either been ill got and dry'd, or distill'd in the *Indies*, or elsewhere, and its strong aromack Oil taken from it, which is a great Cheat and Abuse to *European* Buyers. This *Cinnamon* was the *Cassia lignea* of the Antients, and the same which in some Shops is call'd *Cannella*: The best comes from *Ceylon* aforesam'd, and the worst from *Java*. Its Colour it attracts from the Sun-Beams; for the Bark being taken off from the Tree, and exposed to be dry'd in the Sun, that which is not well dry'd is of an Ash Colour, but if too much burnt with the Sun, it is of a blackish, or of a dark brown: If it be well cur'd, it is of a more rosy or pale red, and, by lying together, and Length of Time, changes into the Colour we have it of here.

[There is a great Variety in Opinions among Authors, about the *Cassia*, *Cinnamon*, and *Malabathrum*; some confound *Cinnamon* and *Cassia* together, and say they only differ in Name, others say the Tree that produces them is the same, but that its growing in different Places makes the Difference, and others that they are taken from different Parts of the same Tree; but the certain Truth is, that they are the Barks of different Trees, so much alike however, that they are not easily known from each other. The Tree which produces the *Cinnamon*, is the *Arbor canellifera Zeylanica, cortice acerrimo seu præstantissimo qui Cinnamomum Officinatum*. Breyn. Prodr. 2. 17. *Laurus Ceylanica glandifera, folio trinervio optimum et legitimum Cinnamomum ferens*. Mus. Zeyl. 12.

That which produces the true *Cassia lignea*, is the *Arbor Canellifera Malabarica cortice ignobiliore, cujus folium Malabathrum Officinatum*. Breyn. Prodr. 2. 18. *Cassia vulgaris Calibacha dicta*. Pil. The Bark of this is brought to us from *Malabar* and *Java*. But there is another *Cassia lignea* more common in the Shops, tho' not nearly so good, of a darker Colour, more mucilaginous in the Mouth, and generally in larger Pieces, which is the Bark of the *Arbor Canellifera Indica cortice acerrimo viscido seu muc-*

laginoso qui Cassia lignea Officinatum. Breyn. Prodr. 2. 17. This is brought from the *East-Indies*, and is what we commonly see under the Name of *Cassia lignea*.

The *Folium Malabathrum* is the Leaf of the *Cannella Sylvestris Malabarica*. Com. fl. Mal. 68. Katou Karva, Hort. Mal. 5. 105. *Pseudo Cassia Dioscoridis*. Jonf. Dendr. 162.

Dioscoridis err'd in saying, this was a Sort of *Lens Palustris*, for there is no Room to doubt its being the Leaf of this Tree, but the true and genuine Leaves are very seldom seen, those of the *Cinnamon* and *Cassia* Trees being generally sent over for them.

The Fruit of the Cinnamon-tree by Coction and Expression, yields an oily Substance, of which Candles are made for People of the first Rank; and from the Neck of the Root they draw a fine Kind of Camphir, very rarely to be met with in *Europe*, and of a spicy Smell.]

4. Of White Cinnamon, or Cortex Winteranus.

WHITE Cinnamon, to which some give the Name of *White Costus*, *Costus corticosus*, *Winter's Bark*, or *Winter's Cinnamon*, because *William Winter* was the first who brought it into *England*; is the Bark of the Trunk and Branches of a Tree, of the Size of a Pear-Tree: The Branches are slender, high, straight, and well adorn'd with Leaves like those of the Spurge Laurel, but more delicate, softer, of a Sea-Green, and very fine Smell; after which grows a round Fruit, of a beautiful red. This Tree grows plentifully, at *St. Domingo* in *Guadaloupa*, all about the sandy, mountainous, or rocky Parts; and is met withal in the Isle of *St. Laurence* or *Madagascar*, where it is call'd *Fimpi*.

The white *Costus* we call white Cinnamon, has so great Conformity with the rough Cinnamon, that but for Colour and Taste, few People could discover the Difference. This is the Bark that some Apothecaries improperly make Use of, instead of *Arabian* or *Indian Costus*, of which we made Mention already, and upon that Occasion, give it the Name of *Indian Costus*; which is very improper, because the *Indian Costus* is a Root almost unknown to us, and this is a Bark we are very well acquainted with. Tho' this is of a warm biting Taste, and very aromack, it is very little in Use, either in Medicine, or to other Purposes, among any of the *European* Nations. It ought to be chosen in fine Pieces, whitish without and within, cleansed from its outer Rind, which is greyish, thick and rough, of a biting, acrid Taste, and a Nutmeg Smell. Some have thought

thought this Bark very useful in the Cure of the Scurvy. It is an Ingredient in some Galenical Compositions, and its Æthereal Oil is excellent for the Gout, and other such Diseases. During the hot Season, there flows from the Trunks of these Trees, a black Gum, fat, and very odoriferous: This is that which some Druggists call *Gum Alouchi*, and oftentimes sell for *Gum Ivy*, or *Bdellium*; which is easy enough to distinguish, in that *Gum Ivy* is very dry, clear, and transparent, and the *Bdellium* is almost like *Gum-Arabick*, but that it won't dissolve in Water; whereas this *Gum* is soft and greasy, of different Colours, very dirty and impure.

Cinnamomum Winteranum, rolls up in Pipes like Cinnamon, but is much larger and thicker, and of a whitish yellow Colour, very hot, biting, and aromatique in Taste, having the Virtues and Relish of most other Spices; and is brought to us out of the *West-Indies*, from *Nevis*, *Antigua*, *Montserrat*, and other of the adjacent Islands. It is an excellent Cephalick, Stomachick, Cordial, and Hysterick: It attenuates and opens, is sudorifick and alexipharmick, prevails against the Vertigo, Megrim, Head-Ach, Apoplexy, Lethargy, Palsy, and most Diseases of the Head and nervous Parts: It strengthens the Stomach, causes an Appetite and good Digestion, expels Wind, and is singular against the Cholick, and griping of the Guts; opens Obstructions of the Bowels, and provokes the Terms: It is a good Cordial, strengthens the Heart, revives the Spirits and fortifies the whole Body, being excellent against Faintings, Swoonings, Sickness at Stomach, Palpitation of the Heart, &c. used as the true Cinnamon, in Powder, Water, Oil, or Spirit; but in large Quantities, to answer the same Intentions.

[The true *Cortex Winteranus* is the Bark of a Species of *Periclymenum*, the *Laurifolia magellanica cortice acri*. C. B. Pin. 461. The *Cortex Winteranus*, *Cortex magellanicus*. Mont. Exot. 8. But this, tho' the right and genuine *Cortex Winteranus*, is seldom seen in the Shops; what we meet with in its Place, is the *Canella Alba*. Rai. Hist. The Bark of the *Arbor Baccifera laurifolia aromatica fructu viridi calyculato, racemoso*. Phil. Trans. 192. This grows plentifully in *Jamaica*, the Bark has no Use in Medicine but as a *Succedaneum*, for and under the Name of the *Cortex Winteranus*.]

5. Of Clove-Cinnamon.

THIS is what we call improperly, *Clove-Wood*: It is the second Bark of the Trunk and Branches of a Tree, whose Leaves come very

near those of the Bay-Tree; after which there grows round Fruit, of the Size of Gall-Nuts, Chestnut-colour'd, very light, which being broke, you may find within a Kind of Kernel: The Fruit has the Smell and Taste of the Clove, which gave Occasion to the Antients to call it *Clove* or *Madagascar Nut*, because we meet with great Quantities of those Trees in that Island. The *Clove-Wood*, or rather the Bark, having the Taste and Smell of the Clove, is at present made Use of, especially by the Hawkers and Chandlers, who sell it, after it is beat to Powder, for powder'd Cloves, though the Cloves are four or five Times as dear as this Bark; and so they deceive the ignorant. They also sell it whole, pretending that it is the Bark of the Clove Tree, which is false, for the Clove is found only in the Island of *Ternate*, and this Bark is from *Brazil*, or from *Madagascar*.

As it is a Bark in some Use, I shall observe that it ought to be chosen pick'd clean from the outward Bark which is usually grey and knotty, and of a dun Colour; that it ought to be thin, of a biting aromatique Taste, and as nearly approaching the Clove, both in Smell and Taste, as possible; but take care that what you buy be not musty, or mix'd with thick Bark, that has neither Taste nor Smell, as happens too often. This is of little or no Use in Physick; but there are some Persons who make a Tincture of it with *Aqua Vita*, or Spirit of Wine, which they sell for Tincture or Essence of Cloves: The Confectioners and Perfumers likewise use it instead of Cloves.

Others say, the *Clove-Bark* is brought to us out of *Turkey*, and is almost in the Shape of Cinnamon, but comes very near the Colour of Cloves, and has the same Taste and Smell; so that the Fragrancy and Odour of each are scarcely discernible one from the other, except by the Strength, Cloves being much stronger than this Bark. We seldom make Use of it in these Parts of the World; but the Natives of the Country where it grows, esteem it as a Cephalick, and good against the Cholick, Wind, Gripings of the Guts, Obstructions of the Courses, &c. taken in Powder from a Dram to two Drams, and in Tincture to an Ounce or two. There is a Water made of it, that the *Hollanders* impose upon us for Clove-Water, tho' at an inconsiderable Price, which is a good Stomachick, and an excellent Vehicle to convey any Cephalick or Anticholick Medicine in.

[This is the *Cassia Caryophyllata* of the Shops: It is the Bark of the *Caryophyllus folio et fructu rotundo*. Breyn. Pr. 2. 26. *Caryophyllus Aromaticus Indiae Occidentalis foliis et fructu rotundo, diphyrenis*,

dipyrenis, seminibus fere orbiculatis planis. Pluk. Alm. 88. The Tree is plentiful in *Cuba*, and elsewhere in the *West-Indies*.

The Fruit of this Tree is frequently, but erroneously sold in the Shops for the *Carpobalsamum*, and sometimes for the *Amomum*.]

6. Of the Peruvian Bark.

THE *Kinquina*, or *Quina-quina*, *Peruvian-Bark*, or the Bark against Fevers, is the external or outward Bark of the Trunk and Branches of a Tree, that grows plentifully in *Peru*, from whence this is brought us, by the Way of *Cadiz*. But as I have never been in *Peru*, to know how to speak exactly of the Trees which produce this Bark, I shall have Recourse to Mr. *Bernard*, who is a very honest Man, and very curious in the Knowledge of Simples, who had a Description of the *Kinquina* given him from one who liv'd twenty Years in *Portugal*, and had made several Voyages to the *West-Indies*, and to *Peru*.

A true Description of the Peruvian Bark.

The *Kinquina* is the Bark of a Tree that grows in *Peru*, in the Province of *Quitto*, upon the Mountains near the City of *Loxa*. This Tree is almost the Size of a Cherry-Tree; the Leaves are round and indented: It bears a long reddish Flower, from whence arises a Kind of Husk, in which is found a Kernel like an Almond, flat and white, cloath'd with a thin Rind; that Bark which comes from the Trees at the Bottom of the Mountains, is thicker, because it receives in more Nourishment from the Earth: It is smooth, of a whitish yellow without, and of a pale brown within. That which comes from Trees on the Top of the Mountains, is much thinner; it is uneven, browner without, and of a higher Colour within; but the Trees which grow on the Middle of the Mountains, have a Bark yet browner than the other, and more rugged. All these Barks are bitter, but that from the Trees at the Bottom of the Mountains, less than the others.

It follows from hence, that the Bark of the least Virtue, is that which grows in the lowest Places, because it abounds more with earthy and watry Parts, than that which grows high, which for the contrary Reason, is better; but the best of all, is that which grows in the Middle of the Mountains, because it has not too much or too little Nourishment. There is another Kind of *Quinquina*, which comes from the Mountains of *Potasi*, and is browner, more aromatick, and bit-

terer than the former, but abundantly scarcer than any of the rest.

Beside the Qualities remark'd in this Bark, it ought to be heavy, of a firm Substance, sound and dry. Beware of such as is rotten, or hurt by Wet, and such as flies into Dust in breaking, or is dirty and unclean, as it happens to be sometimes: But make choice of such as is in little thin Pieces, dark and blackish without, with a little white Moss, or some small Fern-Leaves sticking to it, reddish within, of a bitter and disagreeable Taste; and refuse that which is full of Threads when broke, and of a Russet Colour; and take care that there be not several Pieces of Wood mix'd with it, which you have sometimes sticking to the Bark. This was brought first into *France*, in the Year 1650, by the Cardinal *Lago* a Jesuite, who having brought it from *Peru*, it was had in such Vogue in *France*, as to be sold Weight for Weight for Gold, but the Quantities of it soon afterwards brought over, quickly lessen'd the Price.

The Use of this Bark is for the Cure of Fevers, especially intermitting, for which Purpose it is given in Substance, Tincture, or Infusion; but as it is a Medicine some People have an utter Aversion to, and as the Use of it is of ill Effect, unless properly applied; I would advise no Body to make Use of it without the Direction of an able Physician. The extraordinary Virtues which the *Spaniards* attribute to this *Kinquina*, for the Cure of Fevers, is the Reason why they give the Tree that bears this Bark, the Name of *Palo de Calenturis*, which signifies the *Fever-Wood*.

Kinakina, Quinquin, Cortex Peruviana. The Peruvian, or Fever-Bark, *Lemery*. is call'd so from the Tree that produces it in *Peru*, where it grows, about the Size of our Cherry-Trees; the Leaves are round and indented; the Flower is long, of a reddish Colour, and is succeeded by a Pod, which contains a flat Kind of Kernel that is white, and enclosed in a very thin Skin. There are two Sorts of it, one cultivated, and the other wild; the cultivated is to be prefer'd much before the other: It contains a great deal of fix'd Salt, and abounds with an Oil; it cures intermitting Fevers best used in the Powder, finely sear'd; from a Scruple to two Drums the Dose: There may be likewise an Infusion made of it in Wine or Water for the same Intention. Some say that Bark is best which is of the most lively Colour, and enclining to a dark Cinnamon, most curled up, as coming from the smaller Branches of the Tree, that breaks of a shining Colour, is of a bitter Taste, very astringent; or rough and styptick upon the Tongue, and whitish outwardly: The thick, flat,

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dark-colour'd, is nothing so good ; and if it wants its bitter Taste and Stypticity, it is good for nothing.

It is a Specifick for the curing of all Sorrs of intermitting Fevers or Agues ; and so certain it is in effecting this Cure, that it seldom fails in a skilful Man's Hand : Besides which, Experience tells us, it stops Catarrhs, and all Sorts of Fluxes ; but the great Skill of a Physician is to know to whom, when, how to use it, and how long : First, considering the Nature and Quality of this Medicine, it is evident, it ought not to be given to such as have their Courses stopp'd ; or to such with whom they seldom flow kindly, but come down pale and sparingly ; nor yet to such as are costive in their Bodies, or are commonly troubled with a Constipation of the Bowels ; for to such, the Use of this is generally of ill Consequence ; nor ought it to be given in continual burning Fevers, because it fixes the morbidick Matter, stops the Pores, and so encreases the Heat, and concentrates it, that it infallibly destroys the Patient. Secondly, when it ought to be given, the Persons to whom we allow it to be given, ought to be prepar'd for the Use of it, by some proper Vomits or Purgatives, such as the *Ipecacuana*, the emetick Wine or Tartar ; and purge with *Glauber's Sal Mirabile*, or *Solutivum*, Cream of Tartar, and the like, two or three Times at least, before the Use of the *Cortex*.

Thirdly, You ought to know how it should be given, which is in Powder, from a Scruple, or half a Dram, to a Dram or two ; beat it very small and searce it ; and about an Hour after the Fit is gone off, put your Quantity of Powder in a Glas of good strong White-White or Claret, and drink it off : There are several other Liquors this may be taken in, according to the Fancy of the Patient. In Infusion, take fine Powder of the Bark one Ounce, Claret ten Ounces ; infuse four or five Days, shaking it twice a Day, then decant it clear ; it is given in double the Quantity in Infusion, to that of the Powder, because you take the last in Substance ; you may make a Tincture with Brandy, or Spirit of Wine, whereof take half an Ounce.

In the fourth Place you ought to consider how long, or often the Bark ought to be taken : Herein you must have regard to the Nature of the Fits, their Strength and Accidents that attend them, as Season, Temperature, Use, &c. In Children, and tender Constitutions, the Dose is to be less, but oftner and longer continued : In *Tertian* Agues, it ought to be used at the End of the Fit, and taken at different Intervals, till the next Return. When that is over the Remedy must be repeated in the same Manner, 'till the

Expectation of another Fit ; what Intervals of Time are to be observ'd between each Dose, depends on the Quantity of the Powder, or Strength of the Infusion, or Length of the Intermision between each Fit : The stronger the Infusion, the longer Space of Time is to be between each Dose ; and if the Intermision of the Fits is long, there is no Need of repeating the Doses so often, as if the Intermision was shorter. The whole Quantity, from the first to the last, ought to be about an Ounce and half, or two Ounces ; let it be given an Hour or two before Meat, and two or three Hours after ; and if it be in Infusion, let the Quantity taken be about four Ounces.

To prevent the Return of the Ague, this Method ought to be continued for eight Days, three Times a-Day : First, early in the Morning, then an Hour before Dinner ; and at Night, an Hour before Supper ; but if the Ague should return again, as it does, if you purge after it, the Use of the Bark must be repeated after the same Manner as before, and it will not fail to produce the desir'd Effect, which is absolutely to cure the Ague, so that it shall not return any more. But tho' the Ague seems to be perfectly gone, for several Revolutions of Fits, yet it is necessary to continue the Use of the Remedy, for twelve Days, by which Means you will secure the Patient against any fresh Assault.

It is at the End of the Fit that the Dose is to be given, and it must be continued 'till the Cure is perfected ; which in a single and double Tertian, commonly happens at the second Fit, or at most at the Third : The same is to be understood in a single and double Quartan, wherein you have two whole Days to give the Medicine in, without Interruption ; in which, as in the Tertian, the Ague is master'd at the third and fourth Fit, if not at the very first, which often happens ; and to prevent its Return, the Use of the Bark is to be the longer continued after the Cure ; for 'tis the too hasty Discontinuance of it, which causes the Relapse, and puts the Patient to a new Trouble of running over the same Course again.

This Medicine ought not to be given at the coming on of the Fit, nor yet during the Time of it ; because then, instead of alleviating the Force and Violence of the Ague, it would be apt, by Reason of the febrifick Ferment, to excite a fiercer Conflict, and make the Paroxysm the more violent. This Method being observ'd, the Medicine will intercept the Course of the Disease in its Progress ; and being convey'd into the Mass of Blood, by a gentle Motion, it purifies it, and destroys the feverish Ferment, which would produce a new Fit. It ought likewise to be



be given at several Times, to produce, gradually, the wish'd-for Effect; and but a small Space of Time ought to be allow'd between each Dose, that the second Dose may begin its Operation, when the Force of the first is over; and the third may begin to act, when the Strength of the second is lost. It is given, in like Manner, two or three Hours after, that thereby its Virtue may the better unite itself with the Chyle in the Stomach, in order to its Entrance into the Mass of Blood, to correct, depurate, and renew it. If this Course is pursued, the Cure is in a manner certain and infallible, and it will hardly be possible for the Fit to return again. When the Paroxysm is gentle, in a good Habit, and a good Season of the Year, there is no need of giving it above five or six Days together, once or twice a Day in the Intermission; but when the Paroxysms are strong, oftner, as before directed.

[This is the Bark of the *Arbor febrifuga Peruviana Incolis Gammanaperide*, Jonsl. Dendr. 476. *Arbor febrifuga Peruviana China Ghinæ et Quinquina et Gammanaperide dicta*, R. Hist. 2. 1976. When this Tree has been stripp'd of its Bark, in a few Months it produces a new one, like the Cork Tree; what we have is of three Sorts or Degrees of Goodness; the first of a bitter and resinous Taste, not so red as the common Sort; the second something less, and cover'd with a Moss; the third, the finest, and in the smallest Quills. The Use of this Bark, the *Spaniards* say, was discover'd by Accident, an *Indian*, in a Fever, accidentally drinking the Water of a Pond; into which several of these Trees were fallen, was cur'd by it; which made his Friends and Acquaintance search into the Occasion, and so discover this inestimable Medicine.

Notwithstanding all the good Qualities of this Bark, there requires the Skill of an experienced Practiser to use it; for, in ignorant Hands, it is capable of doing as much harm, as good in skilful.]

7. Of the Bark of both the Mandrakes, Male and Female.

Pomet. THIS is the Bark of the Root of a Plant that is distinguish'd into two Kinds, Male and Female. I shall not trouble myself with the useless Accounts that the Antients have given of this Root, but inform you that both Sorts are very scarce about *Paris*; so that the Apothecaries are obliged to leave out the Leaf of this, as well as that of Navel-wort, in the Composition of the Ointment of Poplar; which is a great Abuse, it being impossible that

the Composition can have the Virtues the Author of it design'd, or that are now ascrib'd to it, when the principal Drugs are left out. Besides, the Apothecaries, instead of making this Ointment fresh every Year, keep it two or three, which is contrary to the Opinion of those Authors, who treat of this, and say, that the cooling Quality of the Ointment *Populeon* holds not above a Year. Those Apothecaries, about *Paris*, who who will have this Composition true, are forced to send for it from *Montpellier*; by which means they discharge their Consciences, and serve the Publick faithfully.

The *Mandrake*, as it grows, bears large green Leaves, trailing or hanging upon the Ground, and the Fruit is very like that of the *Coloquintida*: We sell nothing but the Bark of the Root, freed from its woody Part. 'Tis of an Ash-Colour within, and a little more reddish without, of some small Use in Physick, as it is put into some of the *Galenic* Compositions. With the Bark we have sometimes some of the Root brought us cut into Pieces like Jalap, but it is of little Use, the Heart of it having no more Virtue than a Chip.

The *Mandrake* is a Plant without a Stem, of which there are two Kinds: *Lemery*. First, the *Mandragoras Mas fructu rotundo* of *Tournefort*. The Leaves rise directly from the Root, above a Foot long, broader than a Man's Hand in the Middle, and narrow at both Ends, smooth, of a brownish green Colour, and a disagreeable Smell. Among these, rise short Stalks, each of which bear a Flower made like a Bell, divided commonly into five Parts, a little hairy, of a white Colour, inclining to Purple. When the Flower is gone, it is succeeded by a little round Apple as big as a Medlar, fleshy, and of a yellow green Colour: It contains some white Seeds, which bear the Figure of a small Kidney. The Root is long, thick, whitish, slit, or divided into two considerable Branches, set about with short Filaments, slender almost as Hairs; representing, when it is whole, the lower Parts of a Man; from whence it is call'd *Anthropomorpha*, which signifies the Figure of a Man.

The second Sort is call'd the Female *Mandrake*; *Mandragora Fœmina*; or *Mandragora flore subcœruleo purpurascente*, according to *Tournefort*, the *Mandrake* with a bluish purple Flower. It differs from the former, in that the Leaves are smaller, narrower, more folded, blacker, trailing on the Ground, of a strong stinking Smell; and that the Flowers are bluish, inclining to Purple; the Fruit less and paler, not form'd like a Pear, as some Authors will have it, but round, scented, full of Juice, and containing very small black Seeds. The Root is about a Foot long, divided into two

Branches, brown without, white within, and furnish'd with some Fibres, but nothing like the former. Both Sorts grow in the hot Countries, in the Plains, or mountainous Places; but the last much rarer. They contain in them a great deal of Oil and Flegm, but little Salt. They are narcotick, cooling, stupifying, &c. applied outwardly, and likewise relieve Inflammations of the Eyes, Erysipela's, scrophulous Tumours, and the like. The Apples are cold and moist, but not so cold as the Poot. Being smell'd to, they cause Sleep; so also their Juice taken inwardly, in little Quantities, in a good generous Wine. The Antidotes against their Poison are Wormwood, Rue, Scordium, Mustard, Origanum, Castor, &c. with Wine and Vinegar. The Antients, by *Mandrake*, intended another Plant, quite different from this.

[The Male is the *Mandragora mas*, Dod. *Mandragora fructu majore*, C. B. Pin. 169. The Female, the *Mandragora fructu Pyri*, C. B. Pin. 169. *Mandragoras fœmina* Trag. They are kept in the Gardens of the Curious, and flower in April. Our People who deal in medicinal Herbs, sell the Leaves of the common black Henbane for the *Unguentum Populneum*, instead of those of this Plant. It was formerly esteem'd to have a strong narcotick Quality, and order'd to be given before an Amputation, to deaden the Sense of Pain, by stupifying the Patient; but it is now never used in such, or indeed hardly in any other Intentions.]

8. Of the Autour Bark.

THIS Bark very much resembles, in Size and Colour, the large or gross Cinnamon, except that it is more decay'd on the Outside, and of the Colour of a broken Nutmeg within, distinguish'd with many little Sparkles. It is very light and spongy, of an almost insipid Taste, and without Smell. They bring it from the *Levant* to *Marseilles*, from whence it comes to us. This is of no other Use, than as the *Choiian*, to add to the Perfection of Carmine Colour. A Person assur'd me that it grew about *Paris*, and gave me a Piece of a Bark, which is something like it, but of a bitter Taste, and an earthy Colour, without any Sparkles.

[This is never seen in the Shops, nor used in Medicine.]

9. Of the Cork-Tree.

CORK, which the *Latins* call *Suber*, *Pomet.* is the outward Bark of the Trunk of a Tree, which grows plentifully in *Spain*, *Italy*, and *France*, chiefly in *Gascony*, and

upon the *Pyrenees*. The Leaves of these Trees are of a moderate Size, green on the upper side, and whitish underneath, indented all round; it bears Acorns like those of the Oak.

When the Inhabitants of those Parts would gather this Commodity, they take off the Bark of these Trees from the Top to the Bottom, and after put one Piece upon another, to a reasonable Height, in a Pit or Ditch that is full of Water; and having loaded it with Weights to keep it down, they leave it in this Condition for some Time, and when it is swell'd, soak'd, and laid strait, they remove it to another Ditch, and so to a third and fourth; and after that take it out of the Water to dry: Which being done, it is transported in Bales to different Parts of the World.

Chuse your Cork in fine Boards, all of a Piece, not full of Knots or Chinks, of a moderate Thickness, yellowish without and within, and such as is even when it is cut. We commonly call this Cork, white Cork of *France*; because this Sort is prepar'd in *Guienne*, chiefly from *Bayonne*, from whence almost all that is used in *France* comes. We bring from the same Parts another Kind of Cork, which we call *Spanish Cork*, and which, to be fine, ought to be light, plain, blackish without, as if it had been burn'd, yellowish within, and easy to cut, not rotten; but take the thickest Sort you can get, that being much more esteem'd, and dearer than the thin. A Friend of mine assur'd me, that the Blackness of this Cork proceeded from nothing else, but that it was steep'd in Sea-Water instead of fresh Water.

The Use of this is too well known to need any Account of it; I shall only tell you it is of some small Use in Medicine, as to stop Bleeding, being reduced to Powder, or put into some astringent Liquor: Burn'd, and mix'd with the *Unguentum Populneum*, it is very proper for the Piles. The *Spaniards* burn Cork into an extraordinary fine Black, which is what we call *Spanish Black*, and is used for several Sorts of Work.

Suber Latifolium, the broad-leav'd Cork, according to *J. Bauhin*, *Gerard Lemery*, and *Parkinson*; or the *Suber Latifolium perpetuo Virens* of *Tournefort*, the broad-leav'd Cork that is always green; is a Tree of a moderate Height, very much resembling the Oak, but the Trunk is thicker, bearing fewer Boughs, and the Bark is a great deal thicker, very light, spongy, of an Ash-colour, tending towards a Yellow, which is taken from the Tree first, and afterwards freed from an inner Bark; the Leaves are like the Holm Oak, but much larger and longer, softer, greener on the Outside, sometimes a little indented; the Cups and the Acorns are also like those of the Oak. This Tree grows in the hot Countries,

tries, as *Spain, Italy*, towards the *Pyrenees*, and in *Gascony*; that which grows in *Spain* is different from those that grow about the *Pyrenees* and in *Gascony*, in that the Bark is black on the outward Surface, and the Leaves continue green all the Winter; whereas they fall from the others at the End of Autumn.

The Acorn of the Cork is astringent, and proper in the Wind Cholick; the Dose is from about a Scruple to a Dram; it contains a great deal of Oil and little Salt; but the Bark has less of the Salt, and more of the Oil; it is deterfive and astringent; it stops the Hemorrhoids and Belly-Aches, being beat to Powder: It is proper to heal the Piles, being burn'd and applied outwardly.

[This is the Bark of the *Suber Latifolium perpetuo virens*, C. B. Pin. 424. *Suber Latifolium*, I. B. I. 103. It is kept in the Gardens of the Curious. The remarkable Property of this Tree is, its bearing, the Loss of its Bark without Damage, and producing, in Time, a new one.]

10. Of the Capers Bark.

THE *Cortex Capparis*, or *Cappers Bark*, is the Bark of the Tree of that Name; it is brought dry from *Italy* and *Provence*. It should be chosen new, and of a piercing bitter Taste. It is warm and diuretick, cleansing and detergent: It

is given in Swellings and Hardness of the Spleen, and is an Ingredient in some Compositions.

[This is the Bark of the Root of the *Capparis rotundioris folio*, Ger. 748. *Capparis Spinosa folio rotundo*, R. Hist. 2. 1629. The *Capers*, so common in Pickle with us, are the Buds of the Flowers of the same Tree.

There are besides a great many Sorts of Barks, in which we have no Trade; as the Bark of the Root and Trunk of the Tree call'd *Macer*, the *Coru*, and *Hivorahé*, and others, which we have but little of, and which nevertheless are reckon'd good Medicines, as may be seen in Authors, who have wrote Histories of *Indian Drugs*, to which the Reader may have Recourse; but as many People make Use of Mace in Bloody-Fluxes, some sell this *Macer* in the room of that, believing it to be the same Thing, though there is a vast Difference, this being the Bark of a Tree, but Mace the covering of the Nutmeg.

[The *Coru Bark* is the *Coru* of *Acosta*, *Gariacas*, &c. The *Hivorahé*, properly *Hyvourahé*, a *Brasilian Word*, signifying a scarce Thing, is the *Hyvourahé* of *Thevet*; and the *Macer* the Bark of the *Ulna affinis vasculis Membranacis et semine intus incluso composito*, R. Hist. 2. 1799. But as these are never used, or heard of with us, a more particular Account of them would be foreign to the Intent of this Work.]

The End of the Book of BARKS.

BOOK the Fifth.

Of LEAVES.

P R E F A C E.

I Mean by Leaves the Verdure of Trees, Shrubs, and Plants, and shall therefore only comprehend, in this Book, the Leaves which issue from the Branches or Stalks of Trees or Plants, as these Parts of Plants only ought to be called by that Name. Some use the Word Leaf for the component Parts of Flowers, as *Roses, Tulips*, and others; calling them *Rose Leaves*, &c. But as I have not follow'd that Method, I shall here only treat of the green Leaves which grow from the Stalks, and not of those colour'd Leaves which compose the Flowers of *Roses*, &c.

In this Book I shall also treat of such Leaves as are work'd for Use; as the *Tobacco*, and such as we have the *Fæculæ*, or the Salts drawn from; as the *Anil* or *Indigo*, the *Kali* or *Glasswort*, and others.

I. Of

1. Of Dittany of Crete.

Pomet. **T**HE Dittany of Crete, or Candia, is a Plant of two or three Feet high, whose Leaves are of the Size and Shape of a Man's Thumb, white and woolly both on the upper and under Side; after which rise Flowers in Spikes of a Violet Colour. This Plant, which is very beautiful to look upon, grows plentifully in the Isle of Candia, from whence it takes its Name.

Chuse your Dittany fresh and new, with fine, white, large, thick, soft, woolly Leaves, of a sweet aromatick Taste, and prefer such as is furnish'd with the deepest blue Flowers you can get, and refuse such as has small Leaves, not hairy, and where you meet with it fuller of little Sticks than Leaves. This Dittany is of some Use in Physick, because of its warm aromatick Quality, and is an Ingredient in the Venice Treacle, and some other Preparations.

Origanum Creticum latifolium tomentosum, seu dictamnus Creticus of Tournefort, is a Kind of Origanum, or a fine white Plant agreeable to the Eye: The Stalks grow about two Feet high, hairy, a little purplish, divided into Branches or Twigs; the Leaves are of the Bigness of the Nail of the Thumb, roundish and pointed, with a small End, cover'd on both Sides with a white Down, odoriferous, and of an acrid pungent Taste; the Flowers grow spike-fashion on the Top of the Branch, of a purple Colour; when the Flower is gone, there follow four Seeds that are almost round, enclosed in a Covering that serves as a Cup to the Flower; the Roots are small and numerous. It grows in Candia, on Mount Ida, from whence it is brought dry. The Leaves are aperitive, cordial, proper to provoke the Terms in Women, to hasten Labour-Pains, to open and remove Obstructions, to resist Poison, and drive away malignant Humours by Transpiration. It is given in Powder for all the same Purposes: Dose to a Dram, and half an Ounce of the Decoction, or Tincture, in White Wine, for Sickness at the Stomach.

[This is the *Dictamnus Creticus*, C. B. Pin. 222. Park. 27. *Dictamnus Creticus, sive verus*, J. B. 3. 253. Its Place of Growth is the Island from whence it has its Name, but it is cultivated every where in the Gardens of the Curious; it flowers in July; it has been look'd on as a vulgar Cordial, &c. but is little esteem'd at present, and scarce ever used but as an Ingredient in some of our Compositions.]

2. Of Poley Mountain.

THERE are two Sorts of Poley Mountain, the White and the Pomet. Yellow; the Yellow Poley Mountain is a Plant of the Height of half a Foot, having small thick indented Leaves, garnish'd above and below with a fine yellow Down, inclining to a Gold Colour, and the Flowers around of a Gold Colour, very fine to look upon; of an aromatick Smell, and bitter Taste. This little Plant grows plentifully upon the Mountains and high Hills about Provence and Languedoc; it is brought to us in little Bunches with the White, which grows in the Plains, or by the Way Sides, chiefly in sandy or other dry Places, being, notwithstanding, very different from the former, in that the Leaves are much less, and not so woolly, bitterer, and altogether white; they are used in several Compositions, and are counted alexipharmick and cordial. Chuse such as are newly gather'd with their Flowers on, of a bitter and disagreeable Taste.

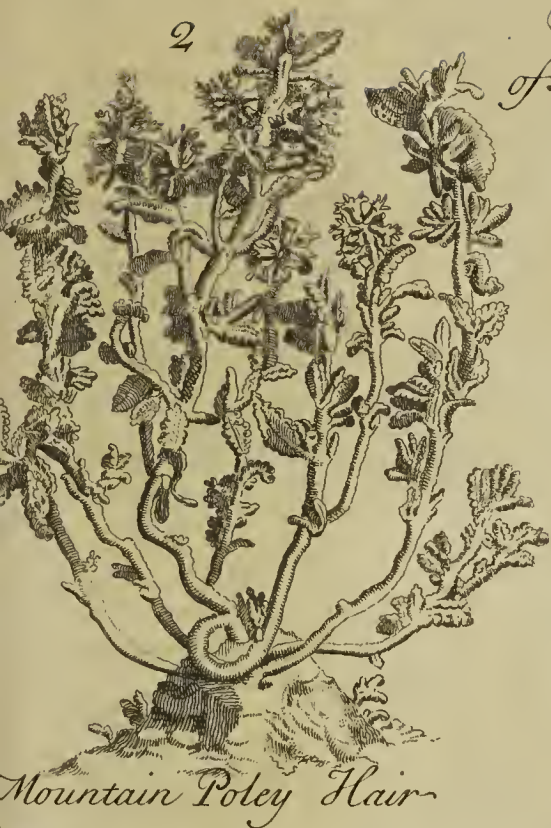
Polium Montanum, or Poley Mountain, is a Plant whereof there are two Lemery. Sorts, one yellow, and the other white; the first is call'd *Polium Montanum luteum*, by Tournefort; or *Polium Montanum vulgare*, by Parkinson: It is of a small Height, very hairy and woolly, bearing a great many slender, round, hard, woody Stalks; the Leaves are small, oblong, thick, and indented; the Flowers, says Mr. Tournefort, are divided into five Leaves, as the Germander Flower; when that is dropp'd, small round Seeds follow, that are enclos'd in a Covering, which serves as a Cup to the Flower: This Plant grows on mountainous and rocky Places in Languedoc, Provence, and Dauphine.

The second Sort is call'd *Polium Montanum album*, by Tournefort, &c. and the Poley Mountain of Montpellier, by others. It differs from the former, in that the Stalks lie upon the Ground; the Leaves are less, and not so full of Cotton; the Flowers are whiter, and less scented. This Plant grows not only on the Mountains and hilly Places, but likewise in the sandy dry Plains, by the Road Sides, in Languedoc and Provence. The Yellow is the best and most valued in Physick. This Plant yields a great deal of exalted Oil and volatile Salt; the Tops are chiefly that which they call in Latin, *Coma Polii*, or Poley-Hair.

They are aperitive, cephalick, sudorifick, vulnerary, provoke Urine and the Terms, resist Putrefaction, fortify the Brain, and expel malignant Vapours from the Head and Heart.

[The

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of Leaves



[The White is the *Polium Montanum album* of most Authors ; *Polium Montanum Monspeliacum*, Park. 24. this is common in *France* and *Italy* : The Yellow is the *Polium Montanum luteum* of most Authors ; the *Polium Montanum vulgare*, Park. 24. this grows in *Spain* and some Parts of *France* ; they are both kept in the Gardens of the Curious here. There are also two other Species of this Plant, call'd Official, which are the *Polium alterum* of the Shops ; the *Polium Lavendulæ folio*, C. B. Pin. 220. *Polium Lavendulæ folio flore albo*, Ger. Em. 655. and the *Polium Montanum Officinarium* of the Catalogues of the Official Plants in *Chelsea* Garden ; this is the *Polium Maritimum erectum Monspeliacum*, C. B. Pin. 221. *Polium Monspessularum*, J. B. 3. 299. These have all the same Virtues, but are very little regarded in the present Practice.]

3. Marum, or Herb Mastick.

Pomet. THE *Marum* is a little Plant that looks pretty to the Eye ; the Leaves are greenish, very small, and Spear-pointed ; the Taste very bitter and disagreeable, and therefore it is call'd *Marum quasi Amarum*, as being bitter. After the Leaves come Flowers in Spikes, almost like those of *Lavender*, which are of a purple Colour, and strong scented.

This Plant grows plentifully in the Isles of *Hyeres*, near *Thoulon*, from whence those who have occasion for it may have it brought. Chuse it fresh, odoriferous, furnish'd with Flowers, and as green as possible. It is little used in Physick, only in the Composition of the *Troches* of *Hedycroi*, and the like ; but Apothecaries frequently substitute *Amaracus*, which is what they call Sweet *Marjoram*, in its Place.

Lemery. *Marum* is a Plant that has two Species ; the first is call'd *Chamaedrys Maritima incana frutescens foliis lanceolatis*, according to *Tournefort*, which is the hoary *Sea-Germander*, with Spear-pointed Leaves. It is a Sort of *Germander*, or a little Plant which grows like *Thyme*, with a great many Branches, or little round Twigs, woody and whitish, cover'd with Leaves larger than those of *Garden-Thyme*, and liker *Wild Thyme* ; the Flowers like those of *Germander*, of a purple Colour ; when the Flower is gone, it bears in its Place four Seeds that are almost round : The whole Plant has an odoriferous Smell, and a piquant biting Taste : It grows in the hot Countries, but is introduced now into most Gardens.

The second Kind is the *Marum vulgare* ; which is a Plant whose Stalks, Branches and Leaves,

are like *Marjoram*, but something higher ; for this grows near two or three Feet high, being woody, and extending its Branches ; it has some Resemblance to the first Sort of *Marum*, but is larger, whiter, and of a bitter smart Taste ; the Flowers and Seeds are like those of *Thyme* ; the Root is woody, and all the Plant of a strong Smell, that is aromatick and agreeable enough ; the best is that which grows in *Spain*, and other hot Countries ; it requires a dry stony Ground ; both Sorts abound with Plenty of Oil and volatile Salt, with a little Phlegm. The *Marum* is cephalick, stomachick, sudorifick, vulnerary, and uterine, being good against all cold and moist Diseases of those Parts, Cramps, Convulsions, Burstings, Strangury, and the Bitings of mad Dogs, Serpents, and other venomous Beasts, being a famous Alexipharmick. It is likewise useful in all malignant and pestilential Fevers. Dose from a Dram to two Drams. The Herb is of the Nature of *Origanum* and Sweet *Marjoram*, and has all their Virtues. The distill'd Oil may be given from two Drops to six, against cold Head-aches, Megrims, Vertigos, Apoplexies, Lethargies, Palsies, Weakness of the Nerves, &c.

[The *Marum* of the Shops, is the *Marum vulgare*, Park. 12. *Thymbra Hispanica Majoranæ folio*, Tourn. Inst. 197. It is kept in Gardens, and flowers in *July*. It is accounted a Cephalick, Sudorifick, and Aperitive, but is seldom used.]

4. Of the Indian-Leaf.

THE *Folium Indum*, *Thamalapatra*, *Malabathrum*, or *Indian-Leaf*, **Pomet.** comes from a large Tree that grows in the *East-Indies*, about *Cambaja*.

The Antients knew as little of this Leaf as of many other Drugs, some having writ that it was found swimming upon several Lakes in the *Indies* : But the most rational Opinion is, that this Leaf comes from a Tree of the Size of the *Lemon*. Among the Leaves grow small Berries, very like those of *Cinnamon*, except that they are less. Some of these Leaves have on their Under-Side a Kind of little Bladder, of the Bigness of a Pin's-Head, which some People will have to be the Seed.

I cannot understand for what Reason the Antients made use of this Leaf in the Composition of Treacle, since it is almost without Smell or Taste ; notwithstanding, I cannot positively affirm that they were to blame in it, because when it is fresh gather'd it may have both ; but I never could find that it had any sensible Quality at all ; however, as I am not able to prevent the Use of it, or hinder its Sale, I shall direct you to chuse it

it in fair Leaves, large, and the greenest and least broken that may be.

Folium Indum, seu Malabathrum, or *Lemery*. the *Indian-Leaf*, is the Size of one's

Hand, like the Lemon-Leaf, of a pale green, smooth, and shining, having three Nerves that run length-ways upon it. It grows upon a Tree that is found in *Cambaja*, from whence it is brought dry'd. Authors advise us to chuse the freshest; having a weak Smell when bruised, like Cloves, and of an aromack Taste; but none of the Leaves that are brought to us have any thing of these Virtues, but appear perfectly insipid and tasteless. By a chymical Distillation it affords an Oil and a flegmatick Spirit, which contains some little Salt in it. This Leaf is hot and dry, agreeing in Nature and Virtues, as they will have it, with Spikenard, or, as others, with Mace. It is warming, digesting, and strengthening; comforts a cold Stomach, and helps Digestion. The Powder is diuretick, stomachick, alexipharmick, and an Antidote against the Plague. Dose from half a Dram to a Dram. A Tincture of it in Wine or Brandy causes a sweet Breath; bathed on the Eye-lids, it strengthens the Eyes, stops the Rheum, and abates the Inflammation.

[See a more perfect Account of this Leaf at the End of the Chapter of Cinnamon, where it naturally came under Consideration, as the Leaf of one of the Trees of that Species.]

5. Of Tea.

Pomet. **T**HE Tea, which the People of *China* and *Japan* call *Cha*, or *Tcha*, is the Leaf of a little Shrub which grows plentifully about *Pekin* and *Nankin* in *China*, and in several Parts of *Japan*: This is reckon'd the best, and, from its excellent Qualities, is call'd the Flower of *Cha*, or *Thee*. It is a slender green Leaf, pointed at one End, and roundish at the other, and a little cut or indented round about; and in the Middle of each Leaf there runs a Filament, or String, from whence proceed a Number of little Fibres. In a Word, it is of the Shape of the Figure represented in the Plate, which was taken from a Branch which was given me by a Person of Probity, who brought it from *Holland*. Among the Leaves, grow several Husks, which are each of the Size of one's Finger's End, of a very particular Shape, in each of which are found two or three Seeds of the Figure of the *Arcca*, of a Mouse-colour'd Grey without, and within having a white Kernel, very subject to be worm-eaten.

This *Japan Tea* differs not from that of *China*, but only as the Leaves are much smaller, and the

Taste and Smell more agreeable, and it is usually of a finer, clearer green. This Difference of Smell, Taste and Colour, has raised the Price; so that the *Japan Tea*, as describ'd before, which is the true Sort, of the fine Violet Flavour, will sell for two Thirds more than that of *China*.

The Tea which the *Dutch*, *English*, and other Nations bring us, is in little curl'd or twist'd Leaves, as it is now sold among us, and is thus prepar'd by the Natives of the Country; who, after they have gather'd it, dry it gently before the Fire, and the Leaves, in drying, curl up just as we now see them. And that the Buyer may not be impos'd on in this Commodity, which always bears a considerable Price, let him chuse that which is the greenest, the best scented, and which is as little broke into Dust or small Powder as possible, and prefer that, as I have observ'd, which comes from *Japan*, before that of *China*.

The Tea is so much in vogue with the *Eastern* People, that there are very few who do not drink it; and the *French* some Years ago had it in universal Esteem; but since Coffee and Chocolate have been introduc'd into that Country, there is nothing near the Quantity used as was before. I shall say nothing of its Virtues, but refer you to such Authors as have treated particularly of it, especially the *Sieurs de Four* and *de Blegny*.

I cannot pass over this Article, without saying something of the Flower of Tea; the Person who gave me the Leaves, made me at the same Time a Present of a Sort of Tea entirely different from the common Tea, in that it is of a blackish brown Colour, and more of the Shape of a Flower than a Leaf; and, whether this be a Leaf or a Flower, it is so valued by the *Dutch*, that they sell it Weight for Weight for Gold, which is about four Pounds an Ounce; as well by reason of the small Quantity they get of it, as for its agreeable Smell and Taste, particularly when it is new, in which it abundantly excels the true *Japan Tea*.

The chief Reason that this is become such a good Commodity to buy in *Europe*, is because the *Dutch*, &c. have it in Exchange for Sage, which the *Japonesse* and *Chinese* are great Lovers of; which is not without Reason, since we have not a Plant that is endow'd with more Virtues than Sage, especially that Sort which, for its singular Goodness, is call'd *Sage of Virtue* among us, and is the same with the *French Sage*; and it is certain, that if this grew in *India*, it would be much more valued; but because it is common, we make no Account of it, notwithstanding the *Latin* Proverb, *Cur morietur homo, cui Salvia crescit in horto?* Why should any body die that has Sage

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of Leaves.

Plate 32

6



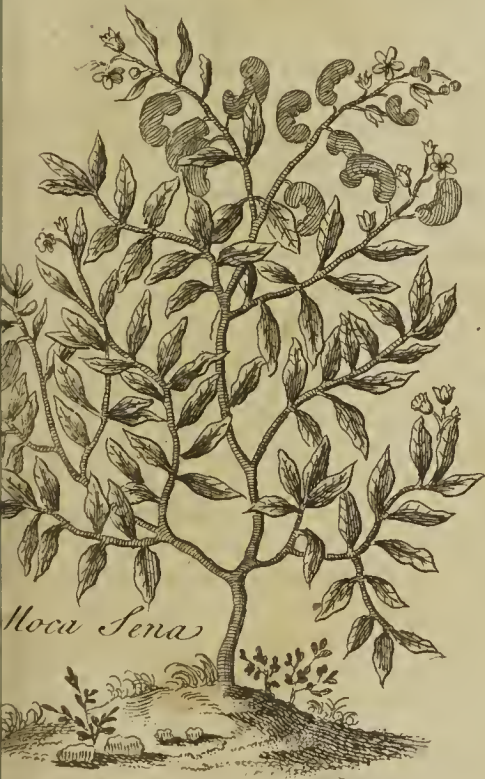
Alexandrian Senna

5



Tea

6



Moca Senna



Tripoli Senna

in his Garden? So that we need not wonder if the *Chinese*, &c. exchange *Tea* for it.

It may not be improper in this Place to refute the Error into which the Author of a Treatise of *Tea*, *Coffee*, &c. has fallen, when he says that this *Tea* produces a blackish Seed, which he saw brought into *France*; but he was wrong inform'd, since the Fruit of the *Tea*, as I have said before, is of the Shape of the *Areca*, and the Size of an Acorn cut in two, and is cover'd with a thin Shell, of a Chestnut Colour. This Author observes, that there is a febrifuge Syrup made of *Tea*, to which he attributes great Virtues, which those who desire to know farther of may consult his Treatise for.

The, or *Tsia*, is a very little Leaf, *Lemery*. which is brought dry'd from *China*, *Japan*, and *Siam*. It grows upon a small Shrub, from whence it is gather'd in the Spring, at which Time it is little and tender. The Figure or Shape of it is oblong, pointed, thin, a little indented on the Sides, of a green Colour. The Flower is compos'd of five white Leaves, form'd like a Rose, and some *Stamina*; which, when gone, is succeeded by a thick Cod, like a Hazel-Nut, of a Chestnut Colour, in which are found two or three Nuts or Berries, which contain in each a little Kernel, of an ill Taste. The Root is fibrous, and spreads upon the Surface of the Earth. This Shrub flourishes equally in rich or poor Ground. The Leaf is more used for Pleasure in the Liquor we call *Tea*, than for any medicinal Purpose; but it has a great many good Qualities, for it lightens and refreshes the Spirits, suppresses Vapours, prevents and drives away Drowsiness, strengthens the Brain and Heart, hastens Digestion, provokes Urine, cleanses or purifies the Blood, and is proper against the Scurvy.

[*Tea* is the Leaf of the *Styraci* & *Euonymo Medicæ affinis*. The *Sinenfium* sive *Tsia Japonenfibus*, flore niveo, simplici & pleno, Br. Pr. 2. 98. *Thea frutex folio Cerasi, flore Rosæ sylvestris, fructu unicocco, briococo, & ut plurimum tricocco*, Kæmp. Hist. Jap. 2. Ap. 2.

We have six Kinds of *Tea* used in *England*; 1. The *Bohea*, of a dark Colour, giving a brown Tinge to the Water it is infused in; 2. the *Congou*; 3. the *Peco*; 4. the *Green Tea*, call'd *Singlo*, of which there are two Kinds; the one with oblong narrow Leaves, the other with smaller; both equally good, and both of a blueish green Colour, crisp to the Touch, and giving a pale green Colour to Water they are infused in; 5. the *Imperial Tea*, the Leaves of which are large and loose, and less roll'd together than those of the former Kinds; the best is green, crisp in the

Mouth, and has the most agreeable Flavour; the sixth is that call'd the *Hyson Tea*, now most used among Persons of the upper Rank. All these Kinds are the Leaves of the same Tree, only differing according to the Time of gathering and Manner of curing. These are much more used for Pleasure than as Medicines; the *Bohea*, however, is esteem'd softening and nourishing, and good in all inward Decays; the *Green* is diuretick, and carries an agreeable Roughness with it into the Stomach, which gently astringes the Fibres, and gives them such a Tensity as is necessary for a good Digestion: Improper or excessive Use may make this, or any thing else that has any Virtues at all, do Mischief; but there are very few Instances of that; and with Moderation, it certainly is one of the best, pleasantest, and safest Herbs ever introduced into Food or Medicine, and in the frequent Use of which, People generally enjoy a confirm'd Health: The *Green* indeed, if drank too freely, is prejudicial to such as have weak Lungs; such People, therefore, ought to drink the *Bohea* with Milk in it.]

6. Of Senna.

THE *Senna*, which some call the *Eastern Leaf*, comes from a Plant, *Pomet*. or rather a Shrub of about a Foot high, which grows in several Parts of the *Levant*, and also in *Europe*. This Plant, or Shrub, bears Leaves which are more or less green, and of different Shapes, according to the different Places where they grow. Among the Leaves come little Flowers of a purple Colour, in Form of Stars; and after them, thin flat Pods, in which are contain'd five or six small Seeds, likewise flat, broad at one End, and sharp at the other; and these Pods are what we call *Senna Husks*.

As *Senna* is a Leaf that is very common among us, from the great Sale of that Commodity, I must inform you there are three Sorts, which we distinguish into *Alexandrian Senna*, *Tripoli Senna*, and *Mocha Senna*; and under these three Kinds there are several other Species, which have no Difference, but from the Places where they are cultivated, as the same Species may have a Variety in the Leaves, Flowers, and Fruit, from the Nature of the Soil where it is cultivated: The finest Sort, and best in Quality, is the *Alexandrian Senna*, that comes from the *Levant*, which pays a Tribute to the Grand Signor; this the *Turks* call *Palte*.

Chuse this *Senna* with narrow Leaves, of a moderate Size, of the Shape of a Spear-Point, yellowish colour'd, of a strong fragrant Smell, in a

manner sweet, the least broke, full of Sticks or dead Leaves, or any other Filth that may be. This Description of *Senna* will undoubtedly appear ridiculous to some People, who have no great Knowledge of it, who will have it that the best *Senna* is that with great, broad, green Leaves: But I am satisfied that no body that understands *Senna* will contradict what I say; and the rather, because I must be allow'd to be a Judge of it, from the vast Quantities of this Drug that have pass'd thro' my Hands; besides that, I have by me the entire Plant, from whence the Figure is engrav'd, as it was brought to me from *Aleppo*. The Use of *Senna* is so common, it would be needless for me to say any more, than that it is a very good Purgative.

The second Sort of *Senna* is that of *Tripoli*, which is a green *Senna*, sold sometimes, but very rarely. It comes next in Virtue to the *Alexandrian*, but is usually more churlish, and has very little Smell; notwithstanding which, it is bought up by those who understand little of it.

The third Sort is the *Mocha Senna*, which the Hawkers call *Pike Senna*, because the Leaves are long and narrow, that is to say, twice as long as the true *Senna* from the *Levant*. The ill Quality of this *Senna* is sufficient to warn you against the meddling with it all; for it is good for nothing.

As to the *Folliculi*, or *Senna-Husks*, their Excellency ought to engage the Physician to prescribe them more frequently, because they purge very gently, and scarce give any Taste or Smell to the Medicine, contrary to the Leaf, which gives so bad a Taste, that most People refuse to take the Medicines made with it. Chuse these Shells thick, large, and of a greenish Colour, with the Seed which is within plump, well fed, and almost like the Stones of Raisins, only flat. Throw such away as are blackish and dry'd, as not fit for internal Use. You may make an Extract of *Senna*, by Means of Fire and Water, and also a Salt, to which some People assign great Virtues, and pretend by its Help to make Infusions of *Senna* of greater Force and Efficacy. Some Authors have writ, that there is Plenty of *Senna* to be found in *Italy*, especially in *Tuscany*, and about *Genoa*; but I believe that these Kinds of *Senna* are rather the Leaves of that Plant which the Botanists call *Colutea*, or the Wild or Bastard *Senna*; an Account of which may be seen at large in Botanick Authors.

There is a Plant found in *France*, which the Botanists call *Gratiola*, which purges more than *Senna*. There is, besides, another Plant, which the Simplers call *Alypon montis Ceti*, because it is found plentifully at *Cette* near *Montpellier*, which

purges more than *Senna*: Some call this *Alypon*, White Turbith.

Senna, Folium Orientale, or *Sena*, is a little longish Leaf, which is brought Lemery. dry'd from several Parts of *Europe*. It grows on a small Shrub, and is of two Kinds; the first is call'd *Senna Alexandrina*, five foliis acutis, the *Alexandrian Senna*, or that with sharp-pointed Leaves, by *Baubine* and *Tournefort*: It carries its woody Stalks a Foot and a half, or two Feet high; from whence come Leaves that are oblong and narrow, pointed, of a yellowish green; the Flowers are made up of five Leaves each, after which come flat crooked Pods.

The second Sort is call'd *Senna Italica*, five foliis obtusis, by *Baubine* and *Tournefort*, or *Italian Senna* with blunt Leaves: It differs from the former, in that the Leaves are larger, more nervous, broad, and blunter at the End. We are furnish'd by the Merchants with three Sorts of *Senna*; the first and second of which are call'd the *Levant Senna*, and the last *Mocha Senna*, as *Pomet* has described them. The Leaves and Pods of all the Sorts afford a good deal of Oil and Salt.

Other Accounts of *Senna* distinguish it into True and Bastard; the True is of three Sorts; first, the *Alexandrian*, with sharp-pointed long Leaves, fresh Sineil, strong Scent, free from Stalks, smaller or narrower than the other Kinds, of a lively Colour; this is the best of all. 2dly, That of *Aleppo*, which is generally fuller of Stalks and Dust, and has a shorter and blunter Leaf than the former. Chuse that which has a good strong Smell, of a pale green Colour, well cleansed, and not musty: This is next in Goodness to the former. 3dly, The *Indian Senna*, which is much like that of *Aleppo* in Form, is the coarsest Sort of all, and the worst, and becomes something worse and weaker by reason of its long Carriage from the *Indies* hither, being often heated in the Hold of the Ship, where it is spoil'd. The Bastard *Senna* is the *Colutea*, or Wild *Senna*, spoken of before.

The Leaf of the best *Senna* is the most famous and common Purge against serous Humours and Melancholy, which it discharges from the Head, Stomach, Lungs, Liver, Spleen, Womb, and Joints; but it gripes sometimes, by reason of the sharp Humours from the Body that join with it, and upon which it acts. It is corrected with Cinnamon, Cloves, Galingal, Ginger, &c. It is a general Purger, and may be quicken'd in its Operation by *Sal Gem*, Salt of Tartar, and Tartar Vitriolate: It is seldom given in Powder, but in Infusion or Tincture, from half an Ounce to two Ounces. There are eighteen or twenty Preparations

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of Leaves.

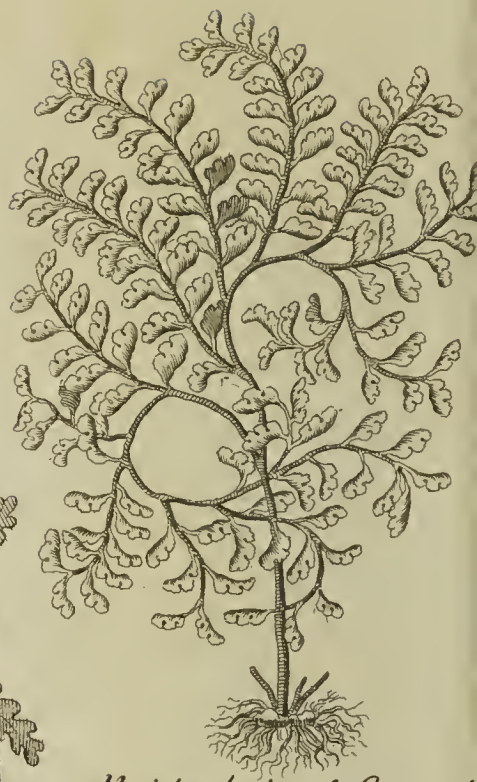
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Polipody



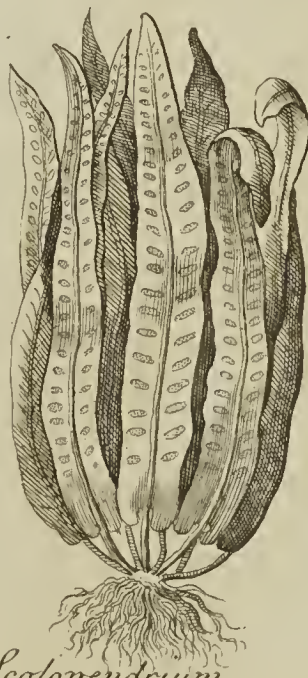
Ceterach of y Shops



Maidenhair of Canada



Maidenhair of Montpellier



Scolopendrium



Salvia Vitæ or Wall Rue

J. Beckington Sculp.

rations of this Leaf in Use, in the most common Dispensatories, as the Extract *Benedictum*, *Decoctum Sennæ Geronis*, *Quercetan's Cathartick*, and the like.

[The best and right *Senna* of the Shops, is the Leaf of the *Senna Alexandrina*, *five foliis acutis*, C. B. Pin. 397. *Senna Orientalis*, Ger. 1114. It grows in *Syria*, *Arabia*, *Persia*, and *Egypt*: The Leaves of this are narrow and pointed.

The worse Sort of *Senna*, too often sold in the Place of this, is the Leaf of the *Senna Italica foliis obtusis*, Boerh. Ind. Alt. 2. 57. *Senna Italica*, Park, 225. The Leaves of this are roundish and something Heart-fashion'd at the End. It purges less, but gripes more than the true *Senna*.]

7. Of Maidenhairs.

Pomet. THE Maidenhairs are little Plants that are brought whole to us from several Parts; the chief and most esteem'd, is that which comes from *Canada*, and is call'd *Maidenhair* of *Canada*, and, by Botanists, *Adiantum album Canadense*, or the *White Canada Maidenhair*. This grows about a Foot high, with a very slender Stalk, hard and blackish; from whence there arise small Branches bearing green Leaves, pretty deep indented, as may be seen by the Figure: It grows likewise in *Brazil*: This is cultivated with great Care in the King's Garden at *Paris*, as well as many other Sorts of exotick Plants, which were brought from several Parts of the World by Messieurs *Fagon* and *Tournefort*, the most eminent Botanists we have had.

Besides the *Maidenhairs* which we have from *Canada*, we have also the Syrup sent to us, which to be of the best Kind should be Amber-colour'd, of a good Taste and Consistence, smelling neither sour nor musty, truly made in *Canada*, and as clear and transparent as possible.

Great Virtues are attributed to this Syrup, especially for Coughs, Catarrhs, and Diseases of the Breast; it is also administer'd to Infants newborn, with a little Oil of Sweet-Almonds. As to the Choice of *Maidenhair*, you must take such as is newest, very green, and the least broke that you can get.

Besides this *Maidenhair* and the Syrup, we have from *Montpellier* another Kind of Syrup, call'd *Capillaire*, which is made from a Plant the Botanists call *Adiantum album Monspelienſe*, or the *White Maidenhair* of *Montpellier*. The Syrup of this is little different from that made of the *Canada Maidenhair*; when faithfully prepar'd, it ought to be of an Amber-Colour, and a very agreeable Taste. There are other Syrups of *Maidenhair*, and the like, prepar'd in the South-

ern Parts, as of *Black Maidenhair*, *Golden Maidenhair*, *Scolopendrium*, and *Ceterach*; some add *Polypody*, *Salvia Vitæ*, or common *White Maidenhair*, and *Liquorice*; and all these Plants together make a red Syrup, which they sell as well as the Syrup of *Maidenhair*. Some Apothecaries distil a Water from the *Maidenhair*, and make a white Syrup of it, which sells very well, but it has no more Virtue than a plain Dissolution of Sugar. Sometimes there comes from *Montpellier* a liquid Conserve of *Maidenhair*, but it is very scarce, and little enquired for. As to the Preparations of the Syrups, I shall say nothing further; but those who would make the Syrup of *Maidenhair* of *Canada* or *Montpellier*, may consult such Books or Dispensatories as treat of them.

Adiantum, or the true *Maidenhair* of the Shops, is a Plant that bears several slender, blackish Stalks, of about half a Foot, or a Foot high, divided into fine delicate Branches, which are adorn'd with little Leaves, like those of *Coriander*, almost triangular, fragrant, and of an agreeable Taste: This Plant bears no Flowers; its Fruit, according to Mr. *Tournefort's* Observations, is produced in a Folding of the End of one of the Leaves; which after it is stretched out, encloses several spherical Coverings which are caked to the said Foldings, and cannot be discover'd but by the Assistance of a Microscope: These *Capsulæ*, or Coverings, are furnish'd with, as it were, a Purse-String, which by its Contraction opens them; they contain some little Seeds in them that are almost round: The Root is fibrous and black; it grows in shady, moist, or stony Places, against Walls, or Sides of Wells and Ditches: The best they have in *France* grows about *Montpellier* in *Languedoc*.

It is brought likewise from *Canada*, *Brazil*, and several other Parts of *America*. where there is a Sort of the dried *Maidenhair*, a great deal larger than ours, call'd by C. *Bauhine*, *Adiantum fruticosum Brasilianum*, and is the same with the *Maidenhair* of *Canada*: The Stalk is slender, hard, and of a brownish red, or purple Colour, tending to black, divided into many Branches, which bear little Leaves, almost like the common Sort, long, and indented on one Side, but whole on the other, soft, tender and fragrant; this is what is most valued, as being the best scented of all the *Maidenhairs*. It is common in several Parts of *America*, and especially in *Canada*; so that the Traders pack up their Goods with it instead of Hay, when they would send them to a distant Country; 'tis by this Means we have such Quantities of it; but it would be much better if they would pack it up in Paper, or Bags, which would preserve the Scent and Virtue of it. Chuse

such as is fresh, green, well scented, whole and soft to the Touch. This Plant contains little Phlegm, a good deal of Oil, but not much Salt; they are pectoral, aperitive, and raise the Spittle, sweeten the Blood, and provoke Womens Courfes. They give the Name of *Maiden-Hair* to four other Kinds of Plants, which in some Measure resemble the *Adiantum*, and to which they attribute the like Virtues, viz. *Filicula*, *Ceterach*, *Wall-Rue*, and *Polytrichum aureum*, or *Golden Maiden Hair*.

The *Adiantum Aureum minus*, and *Politrachum nobile vel primum*, is a little Plant about the Length of a Man's Finger, bearing many Leaves, on Stalks almost as fine as Hair, of a yellowish Colour; the Stalks bear on their Tops little longish Heads, the Roots are very little like small Threads: This Plant grows in the Woods, and against old Walls, and in Bogs and marshy Places; it is a good Sudorifick and Antipleuretick, being infused half a Handful in a Pint of boiling Water, as you make Tea, and used after the same Manner.

Polytrichum vulgare, or the *Trichomanes* of the Shops. M. *Tournefort* has discover'd with his Microscope, that this Plant, as well as the *Adiantum*, bears a little Seed roul'd up in the End of the Leaf, which is very small, and almost round, cover'd on the Ribs with a great many light Particles like Dust; the Roots are very small and stringy; it grows like the other Sort, and is reckon'd a good Pectoral, aperitive and proper for Obstructions of the Liver and Spleen, and in Womens Cafes.

Ceterach of the Shops, or the true *Scolopendrium*, is a Kind of *Maiden Hair*, or a Plant whose Leaves resemble, in some Manner, *Poly-pody*, but they are much less, cut in almost round; their back Parts are reddish or yellow, hairy, and cover'd with a little scaly Matter: M. *Tournefort* has made a Discovery of a Seed in this Plant unknown before: This grows in wild Places in hot Countries; and those of *Languedoc* call it usually *Golden Locks*, because of its near Approach to Hair and its golden Colour. It is pectoral, and particularly appropriated to the Diseases of the Spleen, and is a good Aperitive.

[The true *Maiden Hair* is the *Adiantum foliis Coriandri*. C. B. 355. *Capillus Veneris Verus*. Ger. 982. This grows in *France* and *Italy*.

The *Canada Maiden Hair*, which is another Species of this, is the *Adiantum frutescens Brasiliense*. C. B. Pin. 355. *Adiantum frutescens Americanum summis ramulis reflexis & in orbem Expansis*. Pluk. Almag. 10.

The other Kinds used in Medicine, or kept in the Catalogues of Official Plants, are

1. The *Polytrichum Aureum majus*. C. B. P.

356. This is a large erect Moss, and different in Form from all the *Maiden Hairs*.

2. The *Trichomanes*. Park. 1051.

3. The *Adiantum Album*. Rai. Hist. 1. 146.

4. The *Adiantum nigrum vulgare*. Park.

1049. And

5. The *Adiantum Album folio Filicis*. J. B. 3.

741. *Dryopteris Alba*. Ger. Emac. 1135.

The *Ceterach* mention'd in this Chapter is the *Asplenium sive Ceterach*. J. B. 794. And is not properly a Species of *Maiden Hair*.

These were all once in great Esteem, as Pectorals, Balsamicks and Restoratives; but have of late lost much of their Credit, and are now seldom seen in Prescription.]

8. Of Sea-Bind-Weed and Winter-Green.

Soldanella, or *Corvolvulus Maritimus nostras*, of M. *Tournefort*: The *Pomet*. *Sea-Bind-Weed* is a small Plant, whose Roots are slender, and the Leaves like those of the *Aristolochia*, or *Birthwort*, except that they are less and something thicker; among these grow Flowers, very much resembling those of the common *Bind-Weed*, of a purple Colour. This Plant is brought to us entire from Maritime Parts, where it grows in Abundance; 'tis much used in Medicine, to purge off dropfical Humours; for which Reason Mr. *Brice Bauderon* made it very properly an Ingredient in his hydragogue Powder: You need take no further Care about the Choice of it, only that it be new and as little broke as possible. Beside this *Soldanella*, we sell another Herb call'd *Pyrola*, or *Winter-Green*, of which there are two Kinds, a larger and a smaller; its Leaves something resemble those of the Pear-Tree, from whence it takes its Name, and is also call'd *Winter-Green*, because it preserves its Verdure all Winter, in spite of the hard Season. It is a Plant pretty common in some Places, as *Germany*, and other cold Countries. And as this Plant is something scarce in these Parts, our Herbalists sell to those who want it the young Leaves of the Pear-Tree, raised from Seed, which it is not easy to detect, because of the great Likeness between one and the other: 'Tis said the Decoction of this is a very great Astringent, and that it is very proper for the Cure of Ulcers, and other Maladies of the like Nature.

The *Pyrola* bears several little Stalks, at the End of each of which is a small roundish Leaf of a brownish Green; from the Middle of the Leaves arises a Stem, whose Top is adorn'd with many little white Flowers, of a very good Smell, and the whole Plant is not above a Foot, or a Foot and a half high; it delights much in the Northern

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7



English Maidenhair



Black Maidenhair

8



Pirola or Winter-green



Sea Colewort or Bindweed

J. Beckington Sculp.





Overview of the Negrov.

The Negroes throwing the Indigo into the Water.

The Negroes cutting the Indigo.

Negroes carrying Indigo into the Stoves to dry it.

Negroes Sorting the Indigo in Water.

Anil or Indigo

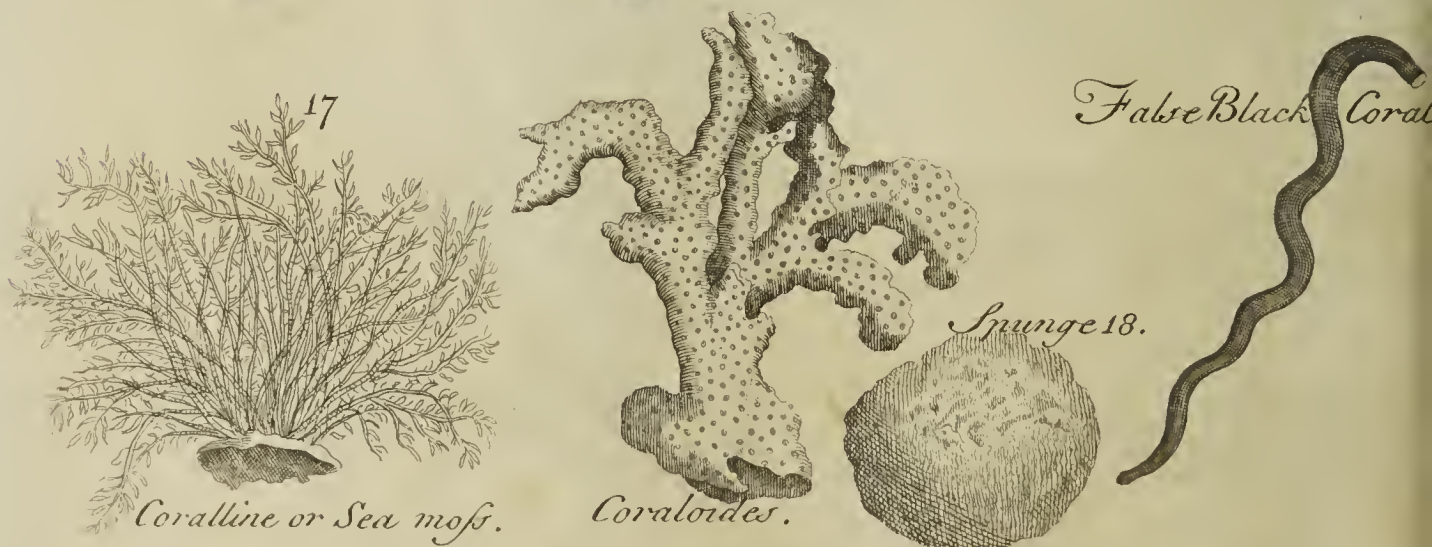


10





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of Leaves.



Northern Countries, which makes it very rare in France, and other warm Climates.

Soldanella, *Brassica Marina*, *Sea Lemery*. *Colewort*, or *Convolvulus Maritimus nostras* according to *Tournefort*, *Sea-Bind-Weed*; is a Species of *Bind-Weed*, or a small Plant that sends forth slender, winding, reddish Stalks, that creep upon the Ground. The Leaves are almost round, smooth, shining, like those of the lesser *Celandine*, but thicker, full of a milky Juice, tied by long Tails, the Flowers are in Form of a Bell, with the Mouth turn'd upwards, as other Kinds of *Bind-Weed*, and of a purple Colour: When these are gone they are succeeded by a Fruit that is almost round and membranous, which contains a corner'd Seed, black or white; the Roots are small and fibrous: The whole Plant has a bitter Taste, and is a little saltish; it grows near the Sea-side, and flowers in June. They dry it entire with the Root, and so it is transported: Chuse such as is fresh or new, as little broke as may be; it yields a great deal of essential Salt and Oil, purges violently, and is used in Dropsies, Palsies, Diseases of the Spleen, Scurvy and Rheumatism: The Dose is from a Scruple to a Dram.

Pyrola, *Winter-Green* or *Sea-Green*, is a Plant of which there are several Kinds. I shall only take Notice of two that have some Use in Physick: The first is call'd *Pyrola nostras vulgaris*, by *Parkinson*, or *Pyrola rotundifolia major*, by *Tournefort*, the greater round-leav'd *Winter-Green*. It bears from the Root five or six Leaves, supported each by a long separate Foot-Stalk, by which they trail upon the Ground; from among these rises a Stem, about a Foot high, furnish'd with several little pointed Leaves, which bear on the Top sweet-scented Flowers that are very beautiful to the Eye, compos'd each of many Leaves, in the Shape of a Rose, of a white Colour, having something rising in the Middle that resembles an Elephant's Snout, which, after the Flower is gone, becomes an angular Fruit, divided into five Cells, fill'd with a Seed that is as small as Dust; the Root is thin, fibrous and winding, all the Plant of a bitter Taste and very astringent.

The second Sort is call'd *Pyrola minima*, or *Pyrola rotundifolia minor*, by *Tournefort*, the lesser round-leav'd *Winter-Green*. It differs not from the former, but only as it is less in all its Parts. These Plants grow in mountainous Places, in Woods and Shades, about *Geneva*, in *Germany*, *Bohemia*, *Moravia*, and other Northern Countries, from whence the dried Leaves are brought; but they are very scarce at *Paris*: Take Care lest the Merchant, too greedy of Gain, mix young Pear-Tree Leaves with them, which it is not easy to distinguish: They are both very

astringent, vulnerary, cooling, proper in Fluxes of the lower Belly, Hemorrhoids and Inflammations of the Breast, being taken in Infusion or Powder; they are likewise used externally in Plaisters and Ointments, to stop Blood, and to dry up Wounds.

[The first of these Plants is the *Soldanella Maritima minor*. C. B. Pin. 293. *Soldanella vulgaris*, *volubilis Marina*. Park. 161. It grows on the Sea Shores, and flowers in June.

The Second is the *Pyrola nostras vulgaris*. Park. 508. *Pyrola rotundifolia major*, C. B. Pin. 191. And the other Species of this the *Pyrola folio mucronato serrato*. C. B. Pin. 181. *Pyrola tenerior*. Park. 509.

But neither of these are now ever heard of in the Shops.]

9. Of Anil, whereof Indigo is made.

THE *Indigo* Plant grows about two Feet high, with round Leaves, of *Pomet*. a Green, inclining towards Brown on the upper Side of the Leaf, and Silver-colour'd underneath, and pretty thick; after which come Flowers almost like those of Pease, of a reddish Colour, from whence come long crooked Pods, resembling a Sickle, which enclose a little Seed in them, like Radish-Seed, of an olive Colour.

When the *Americans* sow this Plant they first dress the Ground, and afterwards make Holes in it about a Foot Distance one from another, and into each Hole they throw ten or twelve of these Seeds, which they cover lightly with Earth, and in three or four Days Time this little Seed will be sure to appear, especially in a wet Season; and in two Months, or six Weeks sometimes, this Plant will be ready to cut and make *Indigo* of, as the Sequel will shew; and, if it is left in the Ground, in three Months Time it will yield both the Flower and Seed: What they fear most, upon account of this Plant, is a Kind of Caterpillar, which in *St. Christopher's* they find sometimes to breed in a Night, and ruin all the promising Hopes of the Inhabitants: The Way they have to remedy this is, immediately to cut down all the Plant, and throw it into a Vat, or Tub, with the Caterpillars and all, which also are of some Service. The other Way to remedy this Misfortune is, to clear a large Space betwixt what they have eat, and what they have not touch'd: This Havock is not seen in *Martinico*.

Indigo is a *Fecula*, or Settling, made by means of Water and Oil-Olive, out of the Leaves of the *Anil*, or *Indigo-Plant*: There is a Difference between that made of the Leaves only, and that which is made of the Leaves and small Branches.

The

The choicest of the former Sort is that which bears the Sur-Name of *Serquissè*, from a Village of that Name, which is twenty-four Leagues from *Surat*, and near *Amadabat*. It is made likewise about *Biana*, and *Cossa* near *Agra*, also in the Kingdom of *Golconda*: The *Dutch* also bring some of it from *Brampour* and *Bengal*, but that is the least valuable of all.

When the Inhabitants of the Places above-nam'd would make the *Feculæ* of *Anil*, in order to make *Indigo* of it, they cut the said Herb with a Sickle, when the Leaves begin to fall upon touching them; and after they have stripp'd them from the Branches they put them into a sufficient Quantity of Water, which is in a Vessel call'd the Steeping-Vat, there letting them infuse thirty or thirty-five Hours; after which they turn the Cock in order to let the Water run off, which is become of a green Colour, inclining towards Blue, into a Vessel of the Nature of a Churn, where it is work'd by a Negro, by Means of a Rouler, or Turner of Wood, the Ends of which are pointed and faced with Iron; this they work 'till the Water abounds with a Lather, then they cast into it a little Oil-Olive; to wit, one Pound into such a Quantity of the Liquor as will yield seventy Pounds of *Indigo*, such as we sell; and as soon as the said Oil is thrown in, the Lather separates into two Parts, so that you may observe a Quantity curdled, as Milk is when ready to break; then they cease working and let it stand to settle; which when it has done some Time, they open the Pipe or Cock of the Vessel, in order to let the Water clear off, that the *Fecula* which is subsided may remain behind, at the Bottom of the Vessel, like Dirt of Lees of Wine: Then taking it out they put it into Straining Bags of Cloth, to separate what Water was left; then they convey it into Chests or Boxes that are shallow, to dry it; and being dried, it is what we call *Indigo*, and that Name is given to this, in all Appearance, because it comes from *India*. Sometimes the *Indians* make their *Indigo* in a Sort of Ponds, made in Form of a Bason, which they prepare with Lime, that becomes of an equal Hardness almost to Marble.

Chuse the *Indigo* of *Serquissè*, in flat Cakes, of a moderate Thickness, neither too soft nor too hard, of a deep Violet Colour, light, and such as swims on Water, and when broken has no white Spots in it; and lastly, such as is copperish or reddish on being rubb'd with one's Nail, and has the least Dust or broken Pieces among it.

We have no Sort of Commodity liable to more various Ways of being sophisticated, or counterfeited, than *Indigo*, when it bears a good Price; which, if I should attempt to relate, it would

make a small Volume of itself; but I do not think it necessary, since it is easy to distinguish that which is good from the bad, by what I have been directing about its Choice.

We have another Sort of this, call'd *Chestnut Indigo*, or *Agra Indigo*, which is almost as good as the *Serquissè*; but as the Form does not recommend it to all the World, it is only in Use with the Dyers. There come to us, beside this, several other Sorts of *Indigo*, which have no other Difference than what arises from the Places where they are made, and the different Seasons and Age of the Herb from which they are made; for the *Indigo* made of the Plant of the first Gathering is better than that of the Second, and the Second better than the Third; the younger the Leaf is which is used, the finer the *Indigo* is, being of a more lively, shining, violet Colour.

The Use of the *Indigo* is for the Dyers and Laundresses, serving the last to put among their Linnen. The Painters use it to grind with White, for painting in Blue; for if it is used alone, and neat, it turns black; ground with Yellow it makes a Green. Some Confectioners and Apothecaries very preposterously employ this to colour Sugars to make Conserves with, and Syrup of Violets, by adding some Orrice; but there is no danger of being thus cheated if the Syrup is bought of reputable Persons.

10. Of the other Sort of Indigo.

THIS *Indigo* is also the *Fæculæ*, made from the *Anil*, which differs not from the former, but as it is made of the whole Plant, Stalk and Leaf; the best of which Kind is that which bears the Name of *Gatimalo*, which comes from the *West-Indies*. It ought to be light, moderately hard, reddish upon one's Nail, such as will swim upon Water; and, in short, to come as near the other Kind as may be. The surest Proof of its Goodness is its burning upon the Fire like Wax, and leaving only a little Ashes behind.

The second Sort of this *Indigo* is that of *St. Domingo*, which differs not from the *Gatimalo*, only that it is not of so lively a Colour. The third is the *Jamaica Indigo*, that is brought to *England*. The fourth is that of the *Leeward-Isles*; all the Sorts are better or worse, according as they are more or less neat and pure; for those who make this, mix it sometimes with Sand or Dirt; but the Cheat is easy to discover, in that the *Indigo*, which is fine and neat, will burn like Wax; and when this is burnt, the Earth or Sand will be left behind. M. *Tavernier* observes, in his Book, Page 242. that the *Indigo* Dust is so subtil, and so penetrating, that those who sift it are obliged to

Book 5.
of Leaves.



Dyers Weed



Woad



Turnsole



Curriers Sumache

to have their Face cover'd, and drink Whey very often: And to confirm this, and make good the Penetration of the *Indigo-Powder*, he says, having put several Times an Egg, in the Morning, near the Sifters of *Indigo*, and at Night breaking it, the Inside has been all stain'd thro' with a blue Colour. This is used only by the Dyers.

Anil, Gili, five Nil, herba rorisma-Lemery. rini facie; or *Indigo-Herb* resembling Rosemary, is a Plant of *Brazil*, about two Feet high, the Leaves round and pretty thick. The Flowers are like those of Pease, reddish, and succeeded by long crooked Pods, containing in them Seeds like Radish-Seed, of an Olive Colour. All the Plant has a bitter piquant Taste. Of this they make *Indigo* [as described by Pomet before.] The Leaf is reckon'd vulnerary, and proper to deterge and cleanse old Ulcers, being applied to the Part in Powder; likewise there may be a Frontal made of it to assuage and abate Pains in the Head.

The *Indicum*, so call'd, because this is prepared only in the *Indies*, is a blue Flower or Meal, brought from thence, made only of the Leaves of *Anil*, by the Means of Water and a little Olive-Oil, [as taught before.] There are several Kinds of it, but the best is that of *Serquisse*, call'd so from a Village of that Name, where it is made. The next is that of *Agra*, made in Shape of a Chestnut, from whence it is call'd so.

There is a Meal made of *Anil*, that is only distinguish'd from the *Indicum* spoken of before, as being made out of the entire Plant. Chuse such of this as is the lightest, neat, and clean, moderately hard, and of a fine bright Colour, and that will swim upon the Water, and flame in the Fire 'till it is almost all consumed.

[The Plant from which *Indigo* is made, is the *Indigo vera Colatæ foliis utriusque Indiæ*. Phil. Trans. 276. *Nil five Anil five Indigo Indica*. Hist. Ox. 2. 202. *Emerus Americanus Siliqua incurva*. Tourn. Inst. 666. It is common both in the *East* and *West-Indies*. It has been generally esteem'd a Poison, and the Use of it is strictly prohibited by the Electors of *Saxony*; some Physicians, however, have prescribed it in the Jaundice and some other Cases.]

II. Of Woad, or Dyers Herb, and other Herbs used in Dying.

THERE is cultivated in *France*, especially near *Thoulouse*, a Plant which is call'd in *Latin*, *Isatis*, or *Woad*; and by the *French*, *Pestel*, *Gresde*, and

Serech. They make a Merchandize of this Plant, which bears some Resemblance or Affinity to *Indigo*, not with regard to the Herb or Form it is brought in, for it looks like Earth; but as it is made from the Leaves of *Woad*, as the *Indigo* is made from *Anil*.

This *Woad* is very heavy; it is used by the Dyers. For making of it, the young Leaves are cut at the End of *February*, or at the Beginning of *March*, and then put into Places to heat and rot, moistening them with Water, and stirring them twice a Week; and when the Herb is reduced in a Manner to Dirt, and become dry, they put it into a Corner, and lay in its Place a second Crop of the Leaves, which have sprung up since this was rotting: When this Crop is rotted in like Manner, they put it to the first, and bring in a third Crop, and afterwards a fourth, for they continue cutting it 'till the End of *September*, at which Time they make the fourth and last gathering; and this it is which makes it of that bad Quality, and fills it so with Dirt; for the *Woad* made of the first Cutting is much more efficacious than that which is mix'd with what is cut in *September*, as well because it is mix'd, as that the Leaves are much harder, and fuller of Sand and Gravel, occasion'd by the Winds and Rain, which happen during that Season.

The Dyers that use this Commodity, dry the Dross or Scum of it; which, when dry, bears some Resemblance in Colour to *Indigo*, and is sold by the Name of *Endigo Flower*, which has given Occasion to Authors that understood not the Commodity, to take this for true *Indigo*, as *Dalechamp* and others did. One may see by the present Description, that it is possible of the young or first Leaves of this Kind of *Woad* to make a blue Flower, or Meal, like the *Indigo*. Beside this *Woad*, they bring from *Picardy* a Plant which the Dyers call *Yellow-Weed*, and the *Latins* *Luteola*. We have also another Sort that comes from *Provence*, for the Use of the Dyers, the Leaves and Stalk whereof are green, which is what the *French* call *Serech*, from the *Arabian* Word *Sereth*. This Plant is likewise call'd *Dyers-Weed*, or *Small Broom*; and by the Inhabitants of the *Canaries*, from whence it first came, *Orisel*.

Beside the Plants already mention'd, we bring from *Portugal*, especially from a Place or Sea-Port call'd *Porto*, a certain Commodity, which is nothing else but Leaves and young Branches of a Tree we call, after the *Arabs*, *Sumach*, beat or pounded; and is the same that is often call'd by the *Leather-Dresseis*, *Rouffe*. This Commodity is in great Use among the Tanners, Dyers and Curriers, to dye green with.

The

The best *Sumach* for dying is that which is greenish and new. This Commodity obtains the Name of *Port of Port*, from the Place it comes from, being *Porto*. Beside the great Use which the Dyers make of the Leaves of this, we use the Fruit, which grows in Clusters, and is of a very fine red, and a sharppish Taste; it is an excellent Remedy for the Flux of the Belly, being boil'd in Water with the Pomegranate Bark. The Fruit, ston'd and dried, are what we call *Sumach Berries*; they have the same Physical Virtues, except that they are not so strong, because of their being dried. They will not keep good above a Year, because their Sharpness and Astringency are then lost.

12. Of the Dutch Turnsole in Paste and in the Cake.

THE *Dutch Turnsole* is a Paste made, according to the best Information I can get, of the Fruit or Berry of a Plant which the Botanists call *Heliotropium Tricoccum*, or *Turnsole*, (which grows plentifully in several Parts of *Holland*) of *Perelle*, or a dry'd Earth that is brought from *Auvergne* in *France*, Lime and Urine: After having mix'd these four Drugs together, they put them into little Barrels that hold about thirty Pounds. Those that make the *Turnsole* in Paste, do not sell it always soft, but sometimes in Form of square Cakes of Bread, which, after it is dried, is what we call *Turnsole* in the Cake; as when the Paste is new made any Thing will mix and be hid in it, the *Dutch*, and others, seldom fail to throw in a Quantity of Sand, to encrease the Weight; and that's the Reason that the *Turnsole* in Cake, or that which is dried, is reckon'd better than the soft. This Cake *Turnsole* ought to be dry, of a Violet blue; and striking a blue, and not a red Colour, on Paper.

It is used by the Dyers, Cardmakers, and others, instead of Indigo.

13. Of Turnsole in Rags.

THE *Turnsole* in Rags, is so call'd because it is nothing but Rags which have been colour'd red with the *Turnsole* Fruit, by the Assistance of some Acid. What is commonly sold in the Shops is nothing but old Rags, or old Linnen, dipp'd either in the Juice of the blood-red Grape, or that of Mulberries, and so dried in the Sun: But this is a Cheat, or an Abuse of the first Design; for the true *Turnsole* ought to be dipp'd in the Juice of the Berry of the Herb call'd *Turnsole*. This Plant, which we call *Turnsole*, the *Greeks*

call *Heliotropion*, the Sun-Flower, because its Flower always turns to the Sun. It bears Berries always three set together, not much unlike the *Palma Christi*; whence it is call'd by *Pliny*, *Heliotropium Tricoccum*, the *Turnsole* with three Berries, which, when they are at their full Maturity, have within them, between the outward Skin and the Kernel, or Seed, a certain Juice, or Moisture, which being rubb'd upon Paper or Cloth, at first appears of a fresh and lively green Colour, but presently changes into a Kind of bluish purple; and the same Cloth afterwards wet in Water or White Wine, and wrung forth, will strike the said Water or Wine into a red or Claret Wine Colour; and these are the Rags or Cloth which are the true *Turnsole*, and ought to be sold in the Druggists Shops, wherewith People colour Gellies, Conservees, Tinctures, &c. as they please; as also to colour all Sorts of Spirits and the like, that have of themselves no Colour.

[It is to be observed, that the Fruit of the *Turnsole* makes of itself a very fine blue, but on being touch'd with any Acid, it becomes red; therefore, when we have a Mind to try whether any Thing contains an Acid in it, we need to do no more than touch it upon something that has been stain'd by this Fruit.]

Of the Turnsole Rags from Lyons.

That of *Lyons* is compos'd as the other, of *Perelle*, quick Lime, and Urine, to which some add a Tincture of *Brazil-Wood*, in order to give it a finer deep red. This is made frequently about *Lyons* and *Auvergne*; it ought to be deep-colour'd, and when rubb'd upon Paper the Colour very lively.

The *Isatis domestica*, sive *Glastum*, *Latifolium* of *Tournefort*, in *English*, *Lemery*. the *Broad leav'd Wood*, or *Dyers-Weed*, is a Plant that bears its Stalks three Feet high, as thick as the little Finger, round, hard, smooth, reddish, divided towards the Top into abundance of Branches, cloth'd with a great Number of Leaves, dispos'd without Order, that are oblong and large as those of Hounds-Tongue, without Hair, of a deep green Colour, and sometimes tending to a Sea-green. The Branches are furnish'd with a great many little Flowers, compos'd of four yellow Leaves, like a Cross, tied by a slender Foot or Stalk. When the Flowers are gone there arise in their Places little blackish Fruit, divided into Tongues, flat on the Sides, containing each two oblong Seeds. The Root is about a Foot and a half or two Feet long, an Inch thick at the Top, and growing smaller by Degrees downwards, white and woody. It is cultivated

The Negroes Stringing & Rolling Tobacco.

14

Plate 37

Tobacco



cultivated in the hot Countries, particularly in *Languedoc*, near *Thoulouse*. The Taste is bitter and astringent. It yields abundance of Oil and fix'd Salt. There is made of this Plant a dry'd Paste, in the Nature of an Extract, which is call'd *Pastel*, or *Indian Flower*. This Plant is vulnerary, drying, astringent. Some People apply it to the Wrist, after stamping it, to cure an Ague, or Intermitting Fever, in the Shaking or cold Fit.

The *Rhus*, or *Sumach*, is a Shrub which grows sometimes the Height of a Tree. The Leaves are longish, large, indented on the Sides, and reddish. The Flowers disposed in Bunches, of a white Colour, each of which makes a little Rose of several Leaves; which being gone, there succeeds a flat Capsula, or Husk, that is almost oval, membranous, and red, containing in it a Seed of the same Figure, which resembles in some Degree a Lentil, of a reddish Colour. The Fruit has an acid astringent Taste. This *Sumach* grows in stony Places, and is used sometimes to season Provisions with; from whence it is call'd *Rhus culinaria*, or *Kitchen Sumach*. The Tanners make Use of the Leaves to tan Skins, thence it is call'd *Rhus Coriaria*, Tanners or Curriers *Sumach*. The Leaves and Fruit are both used in Physick; they are very astringent, proper in the Dysentery, menstrual Courses, and Hemorrhoids, to stop Gonorrhœa's, and the like, being used in a Decoction, or in Powder.

The fine *Turnsole* in Rags, is made of Linnen Cloth died at *Constantinople*, with Cochineal and some Acids. The *Cotton Turnsole*, call'd *Portugal*, or *Spanish Wool*, is made from Cotton that is flatted the Size of a Crown, and dyed in *Spain* or *Portugal*, with *Mexich Cochineal*. Both Sorts are made Use of to colour Liquors, Fruits, and Gellies.

There is another Kind of *Turnsole* that is made with Rags dipp'd in a red Tincture, prepared with the Juice of the Berry of *Turnsole*, and a little acid Liquor. It comes from *Holland*, *Languedoc*, &c. and is used to tinge Wines of a red Colour.

The *Turnsole* in Paste, or in Cake, or *Stone Turnsole*, call'd likewise *Orseil*, is a dry'd Paste made up of the Fruit, *Perelle*, Quick Lime, and Urine; the Colour of the Paste will be blue. The Dyers use that which comes from *Holland*, and they make it at *Lyons*, but it is not so good.

[The Herb from which *Woad* is made is the *Isatis sativa vel latifolia*. C. B. Pin. 113. *Glasium sativum*. Ger. 394. The other two Herbs, call'd Dyers Weeds, are the *Luteola*. Ger. 398, and the *Genistella Tinctoria*. Ger. 1136. The *Sumach* is the *Rhus Coriaria*. 1291. *Rhus folio*

Ulmi. C. B. Pin. 414. And the Plant, with the Berries of which the Linnen and other Things are stain'd for Use, is the *Heliotropium Tinctorium tri-coccum*. Pluk. Alm. 182. *Ricinoides ex qua paratur Turnesol Gallorum*. Tourn. Inst. 665. Each of these Herbs has a Place in the Catalogues of Medicinal Plants, and they have all their several Virtues, according to many Authors; but the present Practice takes no Notice of any of them.]

14. Of Tobacco.

TOBACCO is so called because it is met with plentifully in the Isle of *Pomet. Tobago*; and by some it is called *Nicotiana*, because Mr. *J. Nicot*, a French Embassador in *Portugal*, was the first that brought it into *France* to the Queen Regent, upon which Account it was likewise called the *Queen's Herb*. It is also called *Antartick Buglos*, because it grows much in those Isles; and *Holy Herb*, from its great Virtues; and last of all *Petum*, from *Petun*, which is the Name that the *Indians* give it, and which was the first, and is the true Name for it.

This Plant, at present, is very common in *France*, there being few Gardens where it does not grow: But I shall not entertain you with a long Account of it, it having been writ upon by so many Authors, who have esteem'd it more or less, according as they have liked or disliked it.

We have *Tobacco* in Leaf, in Roll and in Powder. That in Roll is distinguished by several Names; as first, the *Brazil Tobacco*, which is a black *Tobacco*, of the Size of one's Finger. The second is in a dry reddish Leaf, roll'd the Thickness of a large Cane, and is call'd *Sausage-Tobacco*, from being like a Sausage in Shape. And there is another Sort in this Form that comes from *Holland*. The third Kind is that call'd *Dieppe Tobacco*, and is a little black Roll, of the Thickness of a Child's Finger, or thereabout. There are several other Sorts of *Tobacco*, as those of *Virginia*, *St. Domingo*, &c.

As to the *Tobacco* in Powder or Snuff, scented and unscented, there are so many Sorts, it is impossible to treat of them all; for which Reason I shall say nothing of them; but content myself to relate what Father *du Tertre* has writ about the *Tobacco Plant*, which is, That the Inhabitants of the Islands commonly cultivate four Sorts of *Petum*, or *Tobacco*, namely, *Green Tobacco*, *Tongue Tobacco*, *Amazonian Tobacco*, and *Musk Tobacco*. The Savages call all *Tobacco*, without Distinction, *Yoly*. The *Green Tobacco* is the most beautiful, and of the finest Figure. The Leaves are a Foot broad, and two Feet long, but it is commonly very subject to Decay, and not reckon'd of any great Account. The *Tongue Tobacco*

Tobacco, is so call'd because the Leaves grow in the Shape of a Tongue, is very much esteem'd, because it is not at all subject to waste away and damage. These two first Sorts are what are most commonly sold. The *Venice*, or Musk *Tobacco*, is much less than the two former. The Leaves are a little rougher, more wrinkled, and pointed at the End, than the others. It is, in Proportion, the least of all, and is the most inclinable to decay, yet the most valued, and the dearest, because the Leaves have not only a Musk Scent, but the Smoke is perfum'd in the burning of it, with a very agreeable Odour, as that of the other *Tobacco* is unsupportable to a great many People. But what is further remarkable, is, that one Plant of this musk'd *Tobacco* will communicate its Virtue to four others, so as to make them pass for the same; which is usually practis'd in the Places from whence it comes. Tho' the Manner of cultivating, and afterwards making *Tobacco*, be commonly known among the Inhabitants where it grows, it may yet be satisfactory to a great many curious Persons in these Parts of the World, to have as succinct an Account writ of it as may be.

They first of all sow the Seed, which is mix'd with five or six Times as much Ashes. After they have sown the Seed well, and that it begins to rise or spring out of the Ground, they cover it every Morning with Branches of Trees, to defend it from the scorching Heat of the Sun, which would burn it up before it was ready to transplant. They make ready the Garden where they design to raise the *Tobacco*, by clearing, stubbing, cutting, and burning the Wood that is upon the Ground, and freeing it entirely from all Sorts of Weeds. When the Garden is ready, they remove the Plants in a rainy or wet Season, and plant them down again at about three Foot distance from each Plant to another every way, that it may have Room to spread, without the Leaves touching one another, so as to make them rot and corrupt. After the *Tobacco* is thus planted out, Care must be taken from Time to Time, to prevent the Weeds from over-powering it. When the Plant is ready to flower, they stop it short, by cutting it about Knee-high; then pull off the Leaves underneath that hang on the Ground, so that they leave behind about 10 or 12 Leaves upon a Stalk, which being weeded or howed diligently every seven or eight Days, all that Time cleaning away all Weeds, the ten or twelve remaining Leaves will be prodigiously encreased, and become as thick as a good Skin. To know and try whether it be ripe, they rumple or fold a Leaf in their Fingers, if it break in touching, it is ready to cut: Being cut, they leave it spread

upon the Ground; after which they string it upon Cords, so that the Plants may not touch one another; and so they leave it to dry in the Air, fifteen Days or three Weeks: They then pull off the Leaves from the Stalks, and take out the middle Rib, and moistening them a little with Sea Water, twist them into a Sort of Rope, and afterwards roll them up together.

They make, by Distillation of *Tobacco* with Flegm of Vitriol, a Liquor that is emetick, or very vomitive, and proper to cure Itch and Scabs, by rubbing lightly with it. There is a black fetid Oil distill'd from it, by Means of a Retort, which is much of the same Nature. There is likewise a Salt made of it that is Sudorifick, to be given from four Grains to ten, in any convenient Liquor.

There are several other Sorts of Leaves, which we may sell if they come to Hand, as *Betel*, or *Tembul*, which are the Leaves of a creeping Plant, of which the *Indians* make a Kind of Troches with *Areca* and burnt Oyster-Shells, but this Leaf seldom is brought into *Europe*. The *Coca*, which is the Leaf of a small Shrub, pretty like the Myrtle, which the *West-Indians* use as the *East-Indians* do *Betel*, and the *Europeans Tobacco*. The Inhabitants of *Peru* use the Leaves of *Coca* two different Ways; the first, in making a Confit of it with burnt Shells, to secure them from Hunger and Thirst in a Journey; the second, in mixing it with Leaves of *Tobacco*, which makes them as if drunk or mad, and sets them on a thousand Extravagancies.

The *Alcana*, or *Cyprus*, are the Leaves of a Plant which grows plentifully in *Aegypt*, and the *Levant*, and which the *Indians* employ in painting their Nails and Hair yellow, infusing it in Water; and to paint red, putting it in Vinegar, Juice of Citron, Alum-Water, or any other Acids. The *Agyptians* make an Oil of the Berries of this Plant, which is call'd *Cyprus Oil*, very fragrant, and proper for relaxing and softning the Nerves. Several Persons have assur'd me, that the *Alcana*, or *Agyptian Cyprus*, is that which the Botanists call *Ligustrum Aegyptiacum*. There are several other Medicinal Herbs, which the Druggists do not deal in, because the Herbsellers furnish the Apothecaries with what they have Occasion for.

In Places where there are none of these Herbsellers, the Apothecaries have often a great deal of Trouble in sending to a great Distance for a small Quantity of any Herb they want, but they have the Advantage of knowing the Herbs much the better for it, and of using the right Plant, whereas the Herbsellers frequently sell one for another.

Besides

Besides these Herbs, we sell a great deal of a small Seed, of a deep red Colour, no bigger than a Pin's Head, which is found upon the Root of the large *Pimpernel*, which the Dyers use by the Name of Seed *Cochineal*, and sometimes Wood and wild *Cochineal*. This *Cochineal* should be chosen fresh, dry, large, high in the Colour, and the cleanest that can be got.

The Plants that come under the Catalogue of Drugs, are *Scordium*, Mountain *Calamint*, *Germander*, *Chamæpitys*, White *Hore-bound* or *Marrubium*, *Southern-wood*, the great and small *Wormwood*, *Ceterach* or *Spleen-wort*, *Betony*, *Avens*, *Camomil*, *Periwinkle*, *Hemlock*, *Hart's-Tongue*, *Howd's-Tongue*, *Agrimony*, *Rupture-wort*, *St. John's Wort*, the great and lesser *Centaury*, *Melilot*, *Mugwort*, *Mint*, *Baum*, *Basilicum*, *Origanum*, *Savory*, *Hyssop*, *Scabious*, *Thyme*, and several other Herbs treated of so largely by all Botanists, that it will be unnecessary to say any Thing further. We do not sell these Herbs in the Druggists Shops, because of the Herb-sellers; but we sell the fix'd, essential, and volatile Salts, especially those of *Carduus*, *Wormwood*, *Mugwort*, *Centaury*, *Baum*, *Sage*, *Rosemary*, *Succory*, *Scurvy-grass*, *Beem*, and several other Sorts. But as to the Choice of these Salts, that honest People may not be cheated in the Purchase of them, which is too frequently done by the Chymist and Druggist, who instead of any of these Salts, give 'em either Salt-Peter, Salt of Tartar, or Sal-Polychrest, which they put into so many different Bottles, and write the Names of the several Salts upon them: Therefore, I say, to hinder them from being cheated, let 'em throw any of these Salts upon lighted Charcoal, and if they fly off, or sparkle in the Flame, it is certain they are mix'd with Salt-Peter; but it is not so easy to discover the Tartar, but only that this Salt is not so soft to the Touch, as these vegetable Salts.

Nicotiana, in *English*, *Tobacco*, is a *Lemery*. Plant whereof there are principally three

Kinds, the first is call'd, by *C. Bauhinus* and *Tournefort*, *Nicotiana major latifolia*, the broad-leav'd *Tobacco*, and by *Parkinson*, *Tobacco latifolium*. There are a great many other Names more curious than instructive, which I shall pass by: This first Kind bears a Stem of about five or six Foot high, as thick as a Man's Thumb, round, hairy, full of white Pith; the Leaves are broad, and larger than those of *Euula Campana*, without Stalk, a little pointed, stringy, of a pale, green Colour, glutinous in touching, of a sharp burning Taste: Mr. *Tournefort* says, that the Top of the Stem is divided into several Sprigs, that sustain Flowers made like Bells, cut or separated into

five Parts, of a purple Colour; when the Flowers are gone, there is a husky, oblong Fruit succeeds, that is partition'd into two Cells, containing in them a good deal of small, reddish Seed: The Root is fibrous, and of a very biting Taste; the whole Plant is of a strong Smell.

The second Sort is call'd *Nicotiana major angustifolia*, the great Narrow-leav'd *Tobacco*, or *Hyoscyamus Peruvianus*; in Opposition to the first, call'd *Hyoscyamus latifolius Peruvianus*, the *Peruvian Henbane*. It differs only from the other, in that the Leaves are narrower, sharp-pointed, and hang to the Stem by longer Tails or Stalks.

The third Sort is call'd *Nicotiana minor*; the small *Tobacco*, by *Bauhinus*, *Tournefort*, and *Ray*, and by *Parkinson*, *Tobacco Anglicanum*, the *English Tobacco*. It bears a Stalk a Foot and Half, or two Foot high, round, hard, hairy, the Thickness of one's Finger, sometimes branchy, glutinous to the Touch, and carries its Leaves, rang'd alternately, oblong, thick, and of a brownish, green Colour, hanging upon short Stalks; the Flower, Fruit and Seed, are like the first Sort, but the Flowers more inclinable to a yellowish Purple; the Root about a Finger's Thickness, and sometimes divided into white Fibres, that spread themselves round in the Ground. *Tobacco* is cultivated in fat, rich Land in Gardens, and yields Abundance of a sharp, biting Salt, both fix'd and volatile.

It purges upwards and downwards, with a great deal of Violence, in the Apoplexy, Palsy, Lethargy, Suffocations of the Womb, and in the Asthma taken by the Mouth, or being fomented with it; applied outwardly to the Part, or smok'd, it relieves the Tooth-ach; in Powder or Snuff it purgeth the Nostrils, and excites Sneezing, and is a very good vulnerary, the Leaf, Ointment, or Powder, being applied to the Wound.

[The *Tobacco* of the Shops is the Leaf of the *Nicotiana major latifolia*. C. B. P. 169. *Hyoscyamus Peruvianus*. Ger. 285. It is common in the Gardens of the Curious, and flowers in June; the Species call'd *English Tobacco*, is the *Priapeia quibusdam Nicotiana minor*. J. B. 3. 360. *Hyoscyamus luteus*. Ger. 284.

In Regard to the other Things mention'd in this Chapter, the *Betle* is the *Betla Codi Hort*. Mal. 7. 29. *Piper longum foliorum Nervis decurrentibus, tenuioribus et mollicioribus Betle dictum*. Hist. Ox. 3. 603. But as neither this, nor the others that follow it, ever come into the Druggists Shops, and the Herbs are Part of that Class of the *Materia Medica*, which is entirely in the Hands of the Sellers of Medicinal Herbs, I shall not trouble the Reader with a particular Account of them here.

For the *Coccus infectorius*, here call'd *Seed Cochineal*, see the Chapter of *Cochineal*.]

15. Of Coral.

Pomet. CORAL, according to Mr. *Tournefort*, is a Plant that grows at the Bottom of the Sea; it has no Leaf, nor is yet known to have Flower nor Seed; nevertheless it sticks to the Rocks by a Kind of a Root, and is cover'd with a Bark that is adorn'd with Pores like Stars, nearly to the Bottom; it is divided into Branches, and discovers Rays that have some Analogy to Fibres: In short, it is undoubtedly encreased by its Seed, which is the Opinion countenanced by all those that rank *Coral* among the Number of Plants. It is agreed, at this Day, that it is hard in the Sea; the Softness of the Bark or Crust, which is smooth, and almost oily, has, perhaps, deceiv'd those who have asserted that this Plant was soft. The Bark is a tartarous Crust, red upon the red Coral, and white upon the white: The Extremities, or Ends of the Branches, are soft, and also produce little Balls, the Size of a red Gooseberry, divided commonly into six Cells, fill'd with a white Humour like Milk, like that of the *Tithymale*; it is fat, acrid, and astringent. These little Balls are commonly call'd Flowers of Coral, but ought, with more Reason, to be nam'd the *Capsule* of the said Plant: For our modern Authors have observ'd, that the white Juice which they yield, produces the Coral Plants on any Bodies upon which it falls; and besides the Coral they shew at *Pisa*, which sticks naturally upon a human Skull, I have a pretty large Piece that grew upon a broken Piece of Earthen-ware.

There are properly but three Sorts of Coral used in Physick, namely, the red, the common white Coral, which has some Resemblance to the red or flesh Colour, ought to be judg'd a Species of this; the true white Coral, which differs not from the red but in Colour; this is the scarcest and dearest: In its Place they use commonly that Sort for the white, which *J. Baubinus* calls *Corallium Album Officinarum Oculatum*, the white Coral of the Shops, that is full of Eyes: The black Coral, called *Antipathes*, is of no Use at all: It seems indeed of a different Nature from all the others.

They fish for Coral in the *Mediterranean*, on the Coast of *Provence*, near *Toulon*, or *Cape Creuse*, betwixt *Colioure* and *Roses*, upon the Coast of *Catalonia*, in the *Streights* which are betwixt *Sicily* and *Italy*, towards the *Bastion of France*, and in some other Parts; as on the Coast of *Sardinia*, and those of the Isles of *Corfica*

and *Majorca*. The Coral-Fishing, according to Mr. *Tavernier*, is from the Beginning of *April* to the End of *July*, in which they usually employ two hundred Barks, some Years more, and some Years less.

As the Coral grows in the hollow Rocks where the Sea is deep, this is the Artifice they use to get it up. The Coral-Fishers tye two Beams of Wood across, and hang a good Piece of Lead in the middle, to sink them; then they tye Tufts of Hemp about the Beams, which are slightly or carelessly twisted, about the Thickness of one's Thumb, and tye the Beams with two Cords; the one to hang at the Prow, and the other at the Stern of the Bark; so that the Pieces of Wood are left at the Bottom to run along the Rocks, and catch hold of the Coral in their Passage: It is necessary, sometimes, to make Use of five or six Boats to get up the Beams; and during that Time, if one of the Cables happen to break, they are all in Danger of being lost; there is a great Risk in the taking the Coral out, that some does not fall into the Sea; and the Bottom being usually full of Mud, the Coral is apt to be destroy'd as the Fruits of the Earth by Worms; so that the sooner the Coral is got from the Filth of the Sea, the less it is damag'd.

Of all the Corals the red is most in Use, as well for Medicine as other Things; and People that value Coral, the *Japonesse*, and other Nations, most esteem the red Coral; which to be in its Perfection ought to be thick, shining, in fine Branches, and of a beautiful red; the little Pieces, and such as are cover'd with a crusty Matter, ought to be rejected; nevertheless, when that is reduced to Powder, it is every whit as efficacious as the finer. By Means of certain Acids, they make a Tincture of red Coral, which is afterwards reduced to a Syrup, which is reckon'd an admirable Cordial, and useful to purify and cleanse the Mass of Blood. There is likewise a Magistery, and Salt, made of this; but the most common Way of using it is, reduced to an impalpable Powder, by levigating it upon a Marble with Rose-Water, &c.

16. Of Black Coral.

AS to the black Coral, the true Kind is so rare, that it is almost impossible to meet with it; for all that we now have, is only a Sort of Plant that is petrified in the Water, which some have call'd *Antipathes*; but it is entirely different from the true Coral, being very light, and more like Horn than Coral; whereas the true Sort is heavy, of a reddish black Colour, and very rough; with the utmost Diligence I have

have only been able to meet with one Piece of this, and that no bigger than the End of one's Finger; tho' I have a Piece of the common black Coral, of about two Foot long. As to the *Coralloides*, it is nothing else but white Coral that is not brought to its Perfection, and is of no Manner of Use; yet it is sometimes sold instead of the White, tho' it is easy to distinguish, it being large, light, and imperfectly form'd.

17. Of Coralline, or Sea-Moss.

THE Coralline, or Sea-Moss, is gather'd from Rocks, or Shells, in the Sea, to which it grows; there are several Sorts of it to be met withal; but that which is used in Physick comes from the *Bastion of France*, and other Parts of the *Mediterranean*. *C. Baubinus* calls it, *Musculus Maritimus*, *sive corallina Officinarum*.

This Moss or Coralline, is of some small Account in Medicine, as it is said to have a Quality to destroy Worms: As to the Choice, it ought to be greenish, smelling and tasting of Sea Water, and the most free of Dirt and Filth that can be got.

Corallium, *Lithodendrum*, or Coral, *Lemery*. is a stony Plant, that is found growing to Rocks, at the Bottom of the Sea, and crusted over in the Nature of Stone. The chief of what is sold comes from several Parts of the *Mediterranean*. There are three Sorts of it, red, white, and black.

The *Corallium Rubrum*, or red Coral of *C. Baubinus*, grows commonly three or four Fingers high, but such Corals as are found of any considerable Length, are kept in the Cabinets of the curious; it bears several Branches without Leaves, that are very hard, smooth, shining, and of a fine red; the Root is rocky, and of the same Hardness: This Coral is the most used and esteem'd in Physick; chuse such as is all of a Piece, polish'd, shining, and of the highest Colour.

The second Sort is white Coral that grows much about the same Height. There are two Kinds of this, one call'd *Corallium Album*, *Oculatum*, which is a little stony Plant as the former, the Ends of whose Branches are round, and represent, in a Manner, little Eyes. The other is call'd *Corallium Asperum*, the rugged Coral; this is a little strong Shrub, about a Hand high, that is ramose, rough, white, full of Pores, or little Holes, and much lighter than the former; this last grows not only in the *Mediterranean* but in the red Sea, and is of small Account in Physick.

The third Kind of Coral is call'd by *C. Baubinus*, *Corallium extra rubens intus nigrum*, or red Coral without and black within, but this is very scarce; and there is substituted in its Stead a false black Coral, call'd *Antipathes*, which is a stony Sea-Plant, which is usually cover'd in the Sea with a Sort of Bark or tartarous Crust, of the same Colour. When the Corals are young and tender, the Ends of their Branches are found divided into little Balls, of the Size of a small Gooseberry, that are soft, and distinguish'd usually into six little Cells, full of a milky Liquor, that is of an acrid styptick Taste, and these are call'd Coral Flowers.

Others say, but improperly, that Coral, while under Water, is green and soft, but when it once comes into the open Air, it changeth both its Colour and its Nature, and from its Greenness becomes of a very delightful beautiful Red, and from its Softness, of a compacted Firmness, that is hard and durable. It springs up naturally, resembling a Plant or Shrub, adorn'd with many pretty Branches. The red is best, and of that the reddest, the palest being of less Use; but in Medicines a small Sprig Sort is taken for Cheapness. The white is next in Goodness; the best of which is that which is pure, white, and clear, almost transparent, free from Dross, and something resembling white Wax. The black is not valued, yet the greatest Rarity of them all. It is observable, that red Coral, infused two or three Days in white Wax, melted upon hot Embers, and pour'd an Inch over it, loses its Colour, and the Wax becomes yellow. Fresh red Coral put into the same Wax, in the same Manner, becomes brown; and fresh red Coral put in like Manner into the same Wax the third Time, makes the Wax become red; for the Wax dissolves, and draws forth Part of the red sulphureous Particles lying on the Surface of the Coral.

Coral is prepar'd by levigating it on a Marble into a fine subtile Powder. It is cooling, drying, and astringent, strengthens the Heart, Stomach and Liver, absorbs Acidities, purifies the Blood, resists the Plague, and the Force of putrid and malignant Fevers; stops Fluxes of the Belly, and is profitable in the Gonorrhoea and Whites. It is said to prevent the Epilepsy in Children, being first given in the Mother's Milk as soon as the Child is born. It stops bleeding, helps in Difficulty of Urine, and is prevalent against the Stone in the Bladder, and the bloody Flux. Dose from a Scruple to a Dram, in any proper Liquor. Outwardly it helps Ulcers, filling them with Flesh, and cicatrizing; in Collyries it helps the Eye-Sight, stops the Weeping of the Eyes, and absorbs the watry sharp Humours.

Of this there is a Tincture made with Spirit of Vinegar, or Juice of Lemons, and from thence a Syrup, Magistery, and Salt prepar'd; but they are all forced unnatural Preparations. And crude Coral, reduced to such an impalpable Powder, as aforesaid, is far superior to all the other Preparations of it.

Corallina, call'd Coralline, or hard Sea-Moss, is of several Kinds. That which we now use in Physick, is call'd *Muscus Marinus*, *five* *Corallina Officinarum*, Sea-Moss, or the Coralline of the Shops. This is a little bushy Plant, which grows about three Fingers high, bearing a great many little Stalks, that are as fine and slender as a Hair, stony, and furnish'd with very little Leaves, of an ash-colour'd green, and a fishy Smell, the Taste being salt and disagreeable, cracking or crackling betwixt the Teeth like small Stones, and being subject easily to be bruised betwixt the Fingers. Chuse such as is whole, clear, of a whitish green Colour, and very strong Smell. It yields a good deal of Salt and Oil. It is proper to kill Worms, suppress Vapours, provoke Womens Courses, and stop Fluxes of the Belly. Dose, in fine Powder, from half a Dram to a Dram.

The *Coralloides* is a Plant that is but petrified in Part, having the Appearance of a little Shrub, but without Leaves. There are several Sorts of it, which vary in Size, Shape, Hardness, and Colour. They are all usually astringent as to Passage by Stool, and aperitive by Urine, but of no great Vogue in Physick. It is call'd *Coralloides*, as being something like Coral in Figure and Hardness.

Other Authors describe the Coralline to be a hard stony Moss, growing usually on Rocks, in or near the Sea, rising either from the Stones thereof, or from the Shells of Scallops, Oysters, and the like. It grows scarce a Hand high, spreading forth several small Branches, like a green Herb, with many small short Leaves like Hairs. It is gather'd on all the Western Coasts, and the Northern Parts of *Europe*, and is found growing in little white Threads, fasten'd to the Rock or Shell it springs from, as Moss to a Tree; and if good, is very white, in little Strings, like the Unravelling of coarse Linnen Cloth, some an Inch long, some shorter, some longer, of an unpleasant Taste and Smell.

[The red Coral is the *Corallium rubrum majus*. Park. 1299. *Corallium verum*. Boet. 318. the White the *Corallium album majus*. Park. 1300. *Corallium album*. Tourn. Inst. 527. and the Black the *Corallium nigrum*. C. B. Pin. 366. *Keratophyllum arborum nigrum*. Boerh. Ind. Alt. 6. *Lithophyton nigrum arboreum*. Tourn.

Inst. 574. The Red is taken out of the *Mediterranean*, the White mostly out of the *Sicilian*, and the Black out of the *American Seas*; the Red is used in Medicine very much; but all its Preparations, except that of loevigating it into an impalpable Powder, are now entirely out of Use.]

18. Of Spunges.

Spunges are a Kind of *Fungus*, or Sea *Mushrome*, which are found *Pomet.* sticking to the Rocks in the Sea. I shall not detain the Reader to give an Account of what a Multitude of Authors have said concerning Spunges; some saying that they are Male and Female, others that they are neither Plants nor Animals, but both, that is *Zoophytes*, which partake of the animal Kind, and that of Plants too. There are two Sorts of Spunges fold, namely, the fine, which are those the Antients call'd the Male; and the coarse which are the Female. The greatest Part of the Spunges that are sold comes from the *Mediterranean*, and there is a certain Island of *Asia*, that furnishes us with a very large Quantity of Spunges. This Isle is call'd *Icarus*, or *Nicarus*, where the young Men are not allow'd to marry, 'till they shew that they can gather Spunges from the Bottom of the Sea; and for this Reason, when any one would marry his Daughter, a Number of young Fellows are stripp'd and jump into the Sea; and he that can stay longest in the Water, and gather the most Spunges, marries the Maid. The People of this Island pay a Tribute to the Grand Signior in Spunges.

The finer the Spunges are, the more they are esteem'd, and those are reckon'd best that are fairest, clearest and lightest, whereof the Holes are small, and the least full of Stones, that may be; as to the coarse Sort, the nearer they approach to the fine, the more they are valued.

The Use of Spunges is so well known, it would be unnecessary to give any Description thereof; after they are prepar'd, by cutting into sizeable Pieces, and put into melted, white Wax, and afterwards press'd, they are sold to Surgeons, and other People, by the Name of prepar'd Spunges. They are used to dilate the Orifices of Wounds: They are likewise calcin'd to make a Powder for the Teeth: The large or coarse Spunges have a Sort of little Pebbles, and other extraneous Bodies in them; to which, when reduced to Powder by Calcination, they assign a Property of curing the Gravel: Some Authors call these Stones by the Name of *Cystheolithos*, and affirm that such of 'em as are to be found in Shape of an Almond, being



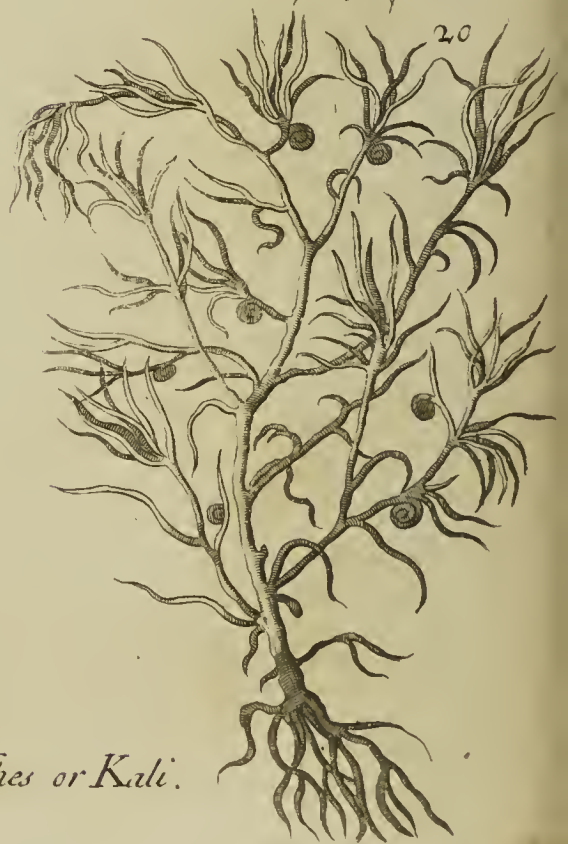
The White Squill.



The Red Squill.



Pancratium.



Pot ashes or Kali.

being pounded and mix'd in any proper Vehicle, are useful to destroy Worms in Children.

The Spunge is a Kind of Mushroom *Lemery.* which grows to the Rocks in the Sea, of which there are two Kinds, [as *Pomet* has describ'd them already.] But though it is taken from the Sea, Authors have not yet determin'd in what Class to place it; some thinking it to be neither Vegetable, Mineral, nor Animal; others, that it participates of them all: Some again place it between Animals and Vegetables, and think it partakes of both of them, for that it has an active Quality to dilate itself, and shrink up together, when in the Sea, and therefore they will have it to be a Plant Animal; because in its Nature it comes near both to that of an Animal and also to that of a Plant.

The most Part of Spunges that we use are brought from *Smyrna*, *Aleppo*, and other Places in the *Levant*. Those which are fine, smooth, soft, and not too full of large Holes in them, are said to grow in the *Archipelago*. Those which are large, fine, close, and lively colour'd, whether white or yellow, are accounted the best. The worst Sort are of a dirty Colour, rugged on the Surface and hard, with small gritty Stones sometimes in them. The Spunge is of an alkalious Nature, and is good against Pains of the Stomach, Gripings in the Bowels, and the Cholick; and is suppos'd to be a Specifick against the Stone and Gravel in the Kidneys or Bladder, or any Obstructions in the Urinary Passages. The chief Use of it is in a Powder calcined.

The Spunge-Stone is found in those Places where Spunges are found, and is made of the Matter of Spunges petrified or harden'd. *Schroder* saith, that it also grows in Spunges, and is a brittle Stone, white or grey. It is attenuating without much Heat, and is good to break the Stone in the Kidneys and Bladder, and to discuss Tumours of the King's-Evil, being drunk every Morning in Urine, or in Wine, with *Sal Gem* and *Tartar*. The levigated Powder absorbs Acids, destroys the Matter breeding the Stone and Gout, cures Heart-burnings, and violent Pains in the Stomach.

[The Spunge used in Medicine is the *Spongia Globosa*, C. B. Pin. 368. *Spongia marina alba*, Ger. 1383. *Spongia marina vesicalis*, Park. 1303. It is found growing to Rocks, Shells, and other Substances, in the Sea.

The Spunge Stone is the *Lapis Spongiæ*, Boet. 407. *Lapides in Spongiis*, Mathiol. 1390. *Spongitis*, Aldrov. Mus. Metall. 671. It is a porous, brittle Stone, of a pale greyish Colour, found in and about the large Pieces of Spunge, but never used now in Medicine.]

19. Of Squills.

SQUILLS are Sea Onions, which are brought from *Spain*, &c. where *Pomet.* they grow plentifully, especially on the Sea Shore; great Quantities also come from *Normandy*, especially about *Roüen*. They are of different Sizes and Colours; but those we commonly have are the red *Squills*, which the Antients call'd the Female. The white were known by the Name of the Male *Squill*; but we meet with very few of them. These Onions bear broad, large, long, green Leaves, and Flowers, like Stars, of a fine white Colour.

Chuse such Roots, or Bulbs, as are sound, heavy, fresh, and full of Juice, and beware of those that are decay'd towards the Head, to which they are subject. They are made Use of in the Shops for making Vinegar and *Oxymel* of *Squills*, and Troches for Treacle, and likewise in some Ointments and Emplaisters. Several Persons have assur'd me, that the *Squills* which we have from *Normandy*, are those that the *Botanists* call *Pancreaticum*.

The *Squills* are reckon'd, especially the Heart, to be Poison; for which Reason they split them in two, throw away the dry Leaves, and the Heart; and the middle Part betwixt both, they expose to the Air to dry; and being thus prepar'd, they make Use of it, as aforesaid, to make Vinegar, Honey, Wine, &c.

Scilla, or the *Squill*, is a kind of *Ornithogalum*, or a Plant, whereof *Lemery.* there are two Sorts. The first is the *Scilla major*, or *Scilla rubra magna vulgaris*, the great, common, red *Squill*, call'd by *Tournefort*, *Ornithogalum maritimum*, seu, *Scilla radice rubrá*, the Sea-Onion, or red-rooted *Squill*; and by *Parkinson*, the true *Pancreaticum*. It bears Leaves of above a Foot long, almost as broad as a Man's Hand, fleshy, very green, full of a bitter viscous Juice: From the Middle rises an upright Stalk, of about a Foot and a Half high, bearing on the Top, Flowers compos'd of six white Leaves, that are form'd round; which, when gone, are succeeded by a Sort of roundish Fruit, rais'd with three Corners, and divided within into three Partitions, which are fill'd with black Seed. The Root is an Onion or Bulb as big as a Child's Head, compos'd of thick Coats or Spheres that are red, juicy, viscous, and encompassing one another, having at the Bottom several thick Fibres.

The second Sort is call'd *Scilla mascula*, the Male *Squill*, or *Scilla minor*, seu *Scilla radice albá*, the lesser *Squill*, or that with the white Root. It varies from the former, in that the Roots and Leaves

Leaves are not so large; besides, this is white, and less common. Both Sorts grow in sandy Places, near the Sea, in *Spain, Portugal, Sicily, and Normandy*. We have them brought to us of all Sizes. They contain a great deal of essential Salt, some Oil and Flegm, and a little Earth.

They are hot and dry, sharp, bitter, attenuating, inciding, absterging, discussing, alexipharmick and diuretick; powerfully cleanse the Stomach, open Obstructions of the Liver, Spleen, Gall, Mesentery; provoke Urine and the Terms, carry off slimy tartarous Matter from the Lungs; for which Reason they are accounted good against Colds, Coughs, Wheezings, Hoarseness, Difficulty of Breathing, and are singular against the Scurvy, Gout, and Rheumatism. The Root is prepar'd by rolling it in Dough, or putting it in Pye-crust, and baking it in an Oven, then taking it out and drying it. Being thus prepar'd, it is fit to make Vinegar of *Squills*, by infusing it in Vinegar. Dose from one to four Spoonfuls: Or Wine of *Squills*, by infusing it in Wine; which is emetick, and good against Asthma's, Phthisicks, Falling-Sickness, &c. given from an Ounce to two, or more. There are several other Preparations of the Root to be met with in every Dispensatory, especially *Quercetan's*, *Swelfer's*, the *Augustan* and *London* Dispensatories.

[The *Squills* generally used are red, which are the Roots of the *Scilla vulgaris radice rubra*, C. B. Pin. 73. *Scilla rubra sive Paneratum verum*, Park. Parad. 133. It grows on the Sea Shores, and flowers in September.

The White, which is not so common, but sometimes brought among the other, and used indifferently with it, is the Root of the *Scilla Hispanica vulgaris*, Ger. Em. 171. *Scilla magna alba*, J. B. 2. 618.

A few Grains of Cinnamon in Powder takes off the emetick Quality of this Root, and makes it a powerful Diuretick, and an excellent Medicine in Dropsies.]

2 o. Of Pot Ashes, Kelp, or Kali.

Pomet. THIS is a grey Salt, which we bring from *Alicant* and *Carthagera* in *Spain*, in Loaves or Cakes of different Sizes. It is made from a Plant that grows along the Sea Coast, which the *Botanists* call *Kali*, and we *Salt-wort*, *Soap-wort*, *Glass-weed*, *Kelp*, and many other Names. This Plant bears a Stalk a Foot and a Half high, or thereabouts, furnish'd with small narrow Leaves. They sow this Herb, and when it is come to a due Height, they cut and manage it like Hay.

When it is dry'd, the *Spaniards* make large

Holes or Pits in the Ground, in the Nature of Lime Kilns, into which they throw a Bundle of the dry'd Herb, to which they put Fire; and when it is well lighted, they throw in other Bundles, 'till they fill it full of the dried Herb; when they have fill'd it, they stop it up, and leave it all together for some Time, that it may not only be reduced the better to Ashes, but likewise incorporate, and be capable to form into a Stone or Cake, in which Form it is now brought to Market; when they have open'd the Pit, they find the said Herb burnt into a hard Stone, which they are oblig'd to break and raise up just as they do Stone out of the Quarry.

We sell at *Paris* four Sorts of *Pot-Ashes*; the first and most valuable of which are those of *Alicant*, which, when they are right, ought to be dry and clean, of a bluish grey without and within, having little Holes made like a Partridge's Eye, and when spit upon and held to the Nose, have no offensive Smell. And beware the Stones be not enclosed with a greenish Crust, or full of Pebbles; for the first will stain and spot and entirely spoil Linen, and the second, by encreasing the Weight, will enhance the Price, besides spotting the Linen, according to the Nature of the Stones that are found within. Likewise take heed that the Bales be not open'd, and the Commodity that was good exchanged for that which is naught, and chuse such as is in small Pieces. This is very much used by the Glass-makers, to make the best Glass, and the Soap-boilers likewise use it considerably, drawing its Salt from it, which they use in the making of white and marbled Soap; but the greatest Part of that which comes from *Spain* is consum'd at *Paris* and the neighbouring Villages by the Scourers or Whiteners, who use it to whiten their Linen.

They make from this Salt, which the *French* call *Soude*, by the Assistance of common Water, a white Salt, call'd Salt of *Kali*, or *Alkali*, which is as much as to say, *Soude* Salt, because *Al* is an *Arabian* Word that signifies Salt, and *Kali*, *Soude*. It is to be observ'd, that this Salt only is properly called *Alkali* Salt; though the fixed Salts of other Plants may be also called *Alkali* Salts, with the Addition of the Name of the Plant they are made from, as the *Alkali* Salt of Wormwood. There are those who pretend that the true *Alkali* Salt, is the Glass Salt, but they deceive themselves, as they may be satisfied in the Chapter concerning the Glass Salt.

The second Sort is that of *Carthagera*, which only differs from that of *Alicant* in not being so good, neither is it of the bluish Cast, but more crufted, and the Bales are much larger. The third Sort of Pot-Ashes is that named the *Bourde* Kind, which

which ought to be entirely rejected, as being so bad, that it is fit for nothing but to deceive those that buy it. This is usually moist, of a blackish green Colour and very foetid. The fourth Sort is that of *Cherbourg*, which is made of an Herb found along the Sea-Coasts of *Normandy*. This is likewise a very bad Kind, being extremely humid, of the same Colour and Smell with the last Sort, and fill'd with Stones. These two Sorts are good for nothing but to impose upon the unwary Buyer, and cheat the poor Whiteners.

21. Of Sandiver, or Glass Salt.

THE *Glass Salt*, which the Workmen call *Sandiver*, or the Scum of Glass, is a fat Drofs that floats upon the Glass Metal when it is in Fusion. And this Froth comes from nothing but the Pot-Ashes, which they use in making their Glass; for the Flints that they make use of will afford no such Scum.

Chuse such *Sandiver* as is in very large Pieces, white without and within, heavy, and the likest Marble that can be; and throw away such as is fat, blackish, and moist. It is very much used by those who make white Earthen Ware, because it assists the Sand in its Vitrification. It is very remarkable that this should be of no Use to the Glass-makers; and the Earthen Ware Workers would not know what to do without it.

It is to be had in all Places wherever Glass is made, it being a sort of superabundant Salt, thrown forth from the Metal while melting in the Furnace, and by the Glass-Men taken off, as the Recrement of their Materials, with a Ladle. It is a very white Salt, and inclining nearest to a nitrous Taste, easily dissolving in the Air, or any moist Place; for as Glass is made of Sand and Pot-Ashes, the latter being put in to make the former melt into Metal; so this *Sandiver* is the Superabundancy of that Salt, more than is requisite to go into the Body of the Glass, which being in Fusion, sends up to the Top whatever is more than requisite for that Purpose. This must be scumm'd off, or else 'twill make the Glass unfit for working, very brittle, and no ways pliable.

The best Metal will yield, in a Pot of two hundred Weight, a quarter or half a hundred of *Sandiver*. The weaker the Salt or Ashes are, the greater is the Quantity of *Sandiver*: They yield some four or five Parts more than others do. When the Ashes are bad, they are forced to fill the Pot four or five Times with more fresh Ashes, by reason of the Quantity of *Sandiver* that is in them, before the Pot will be fill'd with Metal. They dare not cast in any cold Water to hinder

the Boiling; for if they should, the Furnace and the Pots would be blown up together.

This *Sandiver* serves to make Metals run; and a little thereof put into *Antimony* and *Salt-Petre*, for making *Crocus Metallorum*, encreaseth the Quantity of the *Crocus*, and it will therewith separate the better from the *Scoria*.

'Tis sold in *France*, and there used to powder their Meat, and also to eat instead of common Salt. Dissolv'd in Water, and pour'd upon Garden Walks, it destroys both Weeds and Vermin. The more nitrous and foffile the Salts are, the more Unctuosify they have, and the more they run into *Sandiver*, to which Nitre comes somewhat near in Colour, Taste and Fatness.

It is said wonderfully to dry and heal Scabs and Manginess, the diseased Part being bathed with Water, in which it is dissolv'd. *Parkinson* says that *Sandiver* works much the same Effect with the Ashes of *Kali*, or Pot-Ashes; and is used often, being ground fine, either to be blown into Horses Eyes, or, being dissolv'd, squirted into them with a Syringe, to take away any Skin, Film, Cloud, or Pearl, growing on the Sight. It is also used to dry up running Sores and Scabs, Tetters, Ring-Worms, and such like Blemishes of the Skin.

22. Of Crystal-Glass, and many other Sorts, with the various Ways of Colouring them, &c. from Pomet, Lemery, and several other Authhors.

GLASS is a Composition, or Mixture of Ashes, or some Alkalifate Salt, with Sand, Crystal, Flints, Pebbles, or other Stones, melted together into one Body, by the Force of Fire. The first Ingredient going into the Composition of Glass, is Pot-Ashes, called by the *French*, *Soude*, & *Roquette*; and by the *Italians*, *Polverina Barillia*, &c. There is little or no Difference in the Goodness of these Pot-Ashes, but as to the several Places they are brought from; for the best Ashes make the most Salt, and the clearest and finest Glass. Pot-Ashes made of *Kali*, which comes from the *Levant*, make a far whiter Salt than the *Barillia*, and by Consequence a more perfect and beautiful Crystal.

Some use Brass Boilers in making this Salt, which may do, where green or blue Colours are to be made; for this strong Lye will fret off some Part of the Metal or Verdegreafe, which will damage a Crystalline Glass: In this Case therefore, the better Way is to have the Copper, or Vessel, doubly lin'd with Tin, because that emits no Tincture: Also, in making the aforesaid Salt, you must

must mix a Quantity, more or less, of Tartar calcin'd to Whiteness, with your Pot-Ashes; because it makes not only more, and a whiter Salt, and a more beautiful Crystal, but likewise opens the Body of the Pot-Ashes, causes a speedier Dissolution, and a better Extraction of the Salt, just as Alum or Vitriol opens the Body of Salt-Petre, in making *Aqua Fortis*, or Spirit of Nitre, which otherwise, without such Addition, would not rise so easily.

The second Ingredient that enters into the Composition of Glass, is Glass Stone, or Sand; and this is what gives Body, Consistency and Firmness to Glass, as Iron gives to *English* Vitriol, and Copper to *Hungarian*, *Dantzick*, and *Roman* Vitriol, which otherwise would run into Water, in moist Places and Seasons. Glass Stones are properly all, or most Sorts of Stones, which will strike Fire with a Steel; these are apt to vitrify, and easy to make Glass and Crystal withal; those which will not strike Fire with a Steel will never vitrify, whereby you may partly know the Stones which will, and which will not, be transmuted into a glassy Body.

The first Place is given those Stones which are white, but not transparent, of which Kind is *Tarso*, which is a Sort of hard White Marble, found in *Tuscany*, at *Pisa*, *Seraveza*, *Carara*, the River *Arno*, above and below *Florence*, and in many other Places in the World; that is the best which is without blackish or yellowish Veins in it like Rust. The next to a Kind of Pebble, in Appearance like White Marble, something transparent, and hard as a Flint, which being struck, gives Fire, and turns not into Lime: This, when first put into the Fire, becomes white, and loses its Transparency, and afterwards it turns to Glass.

Where fit Stones cannot be had, Sand is made Use of; and as some think, and affirm with good Reason, was the first Material made use of in making Glass; it must be small, white, and very clean, and well washed, before it be used, which is all the Preparation of it. This is usually met withal upon the Mouths and Banks of Rivers, and in many Places upon the Sea Shore, and sometimes upon Inland Sand-Hills. White Crystal Glass requires a fine, clear, transparent Sand, but green Glasses a more coarse and brown.

The last Ingredient is *Manganese*, or *Magnesia*, so call'd from its Likeness in Colour, Weight and Substance to the Lead-Stone, and it is accounted one of the Kinds thereof; it is found in *Germany*, *Italy*, *Piedmont*, &c. and of late Years, in *England*, among the Lead Mines; and wherever the Miners find it, they certainly conclude that Lead-Ore lies under it. The Potters spend great Quan-

ties of it, this being the only Material wherewith they colour their Black, as they do Blue with Zaffer. That is best which has no glittering Sparkles in it, and is of a blackish Colour; but being powder'd, of a dark Lead Colour: 'Tis a Stone very hard and ponderous, and the deeper its Colour is, the deeper it colours the Metal in the Furnace; this is to be put into the Melting-Pot together with the *Fritt*. This is the most universal Material used in making of Glass; and is that which alone purges off the greenish, bluish Colour which is in all Glass, and makes it not only clear and diaphanous, but also makes it dark, black, red, and purple, according to the Proportion which is added. The *Manganese* of *Piedmont*, and that of *England*, which are the best of all others, leave the Glass white, and take away from it the Greenness and Blueness; the Reason of which Operation seems to be a Change in the Figure, and more minute Parts of the Metal; for the Fire making the *Manganese* run, mixes it with the smallest Atoms of the Metal throughout, which by boiling and various Agitations and Revolutions of them, form those Reflexions of Light, which we call white, clear, and diaphanous.

As much *Manganese* prepar'd must be used in common white Glass, as in that made of Flint, or Crystal; the Quantity of the *Manganese* is uncertain, and is only known by Practice and long Trial, and therefore cannot be positively determin'd, either by Weight or Measure, but must be wholly left to the Eye, Judgment, Trial and Experience of the Artist. In putting of it in, you are to try whether it has enough of *Manganese*, or no; if it be greenish, give it more *Manganese*, with Discretion, and put it in by little and little; for otherwise, instead of a clear, white, diaphanous Colour, which in just Proportion it always gives, if too much be added it will make a dusky Purple, or Black, and take away the Splendor of the Metal, which otherwise would be clear and shining; for it is the Property of *Manganese*, to take away the Foulness and Greasiness which Crystal has, and to make it resplendent, white and clear.

A fourth Ingredient also has of late been added to the Composition of Glass, which is Salt of Tartar: If the Proportion of twelve Pound of pure Salt of Tartar be added to a hundred Weight of *Fritt*, it makes it, without any Comparison, much fairer and more pliable to work than ordinary. This Salt of Tartar must be very pure, and put in when the *Fritt* is made, mix'd with the Glass Stone, *Tarso* or Sand, together with the *Pulverins*, *Rocheite*, or *Pot-Ashes* listed and made fine, whereof the *Fritt* is to be made. Hitherto of the Materials; but to descend to the Instru-

Instruments, and the Manner of working in the Glass, would be beyond the Scope and Intention of this Performance, therefore I shall proceed to shew how to turn the Materials into *Fritt*, of which Glass is made and fashion'd.

Fritt is nothing else but a Calcination of those Materials which make Glass; and tho' they may be melted, and make Glass without Calcination, yet this would require Length of Time, and occasion much Weariness, and therefore this Calcination was invented to calcine the *Fritt* in the *Calcar*; which when it is calcin'd, and the Proportion of the Materials is adjusted to the Goodness of the *Pot-Ashes*, it presently melts in the Pot, and admirably clarifies. *Fritt* seems to be deriv'd from *frittare*, to fry; since, indeed, it is nothing else but Salt or Ashes mix'd with Sand, or Stone, in fine Powder, and so fry'd or bak'd together; the *English* call the whole Quantity, bak'd at a Time in the *Calcar*, a *Batch*: Then it runs into little Lumps like *Fritters*, call'd often in *Italian*, *Fritelle*, or little Fritts.

It is of three Sorts; first, *Green-Glass Fritt*, made of common Ashes, without any Preparation of them, other than beating them to Powder, and a hard Sand fetch'd from *Woolwich* in *Kent*. Secondly, Ordinary *White Fritt*, made of Ashes of *Polverine*, or *Barrillia*, without extracting the Salt from them, which makes common White Glass. Thirdly, *Crystal Fritt*, made with *Polverine*, or *Pot-Ashes*, and Salt of Tartar, with white Crystalline Sand, Crystal, Pebbles or Flints. The Materials must be finely powder'd, wash'd, searfed, and then incorporated well together, which put into the *Calcar*, will exactly mix in the smallest Particles, and minutest Atoms; for otherwise the Salt and Sand will, in the Melting-Pot, easily separate one from another, which they are apt enough to do were they not stirr'd with the Rake.

To make the second Kind, or common white Sort of *Fritt* for the White Glass; searfe the pure *Pot-Ashes*, and what will not go thorough, beat and searfe again; beat also finely and searfe your *Tarso*, *Crystal*, &c. Take of the Ashes, &c. one hundred Weight, of the Stone from eighty to ninety; pure white Crystalline Sand, wash'd and freed from all its Filth, six Pounds; mix all together, then put them into the *Calcar*, or calcining Furnace, when it is hot; at first mix and spread them well in the *Calcar*, with a Rake, that they may be well calcin'd, and continue this 'till they begin to run into Lumps; the *Fritt* will be perfectly wrought in five or six Hours, being stirr'd all the Time, and a sufficient Fire continued; when you wou'd see whether it be enough or no, take a little of it out; if it be white,

yellowish and light, 'tis enough: The calcining it more than five or six Hours is not amiss; for by how much the more it is calcin'd, by so much the better it is, and the sooner it melts in the Pot; and by standing a little longer in the *Calcar*, it loses the Yellowness and Foulness, which it wou'd communicate to the Glass, and becomes more clear and purified.

It is here to be noted, that in *Italy*, and other Places, when they take the *Fritt* out of the *Calcar*, they throw upon it a good Quantity of cold Water, while it is hot, then set it in a Cellar, from whence a Lye will drop, which may be strengthen'd with calcin'd Tartar to be kept for Use, with which they now and then water the *Fritt*; which being heap'd up together in a moist Place, the Space of two or three Months, or more, grows in a Mass, like a Stone, and is to be broken with Mattocks: This, when it is put into the Pot, soon melts and makes Glass as white as Crystal; for this Lye is thought to leave, upon the *Fritt*, its Salt which produceth this Whiteness, and makes it easier to melt, and more Crystalline, as aforesaid.

To make *Crystal Fritt*, commonly call'd *Bolito*: Take of the best clear Pebbles, Crystal, *Tarso*, or Flint, ground small in a Mill, and searfed as fine as Flower, two hundred Pounds; of pure Salt of *Polverine*, or *Pot-Ashes*, sifted also, one hundred and thirty Pounds; put them into the *Calcar* when it is well heated; for should the *Calcar* be cold, the *Fritt* would never be made: At first, for an Hour, make a temperate Fire, and always mix the *Fritt* with the Rake, that it may be well incorporated and calcin'd; then increase the Fire, always mixing the *Fritt* well with the Rake; for it is of great Importance, which you must continually do for five Hours, continuing a strong Fire; then take the *Fritt* out of the *Calcar*, being perfected, and put it into a dry Place on a Floor, and cover it well with a Cloth, that no Filth or Dust may fall upon it; and you must take care of this, if you would have good Crystal. The *Fritt*, thus made, will be white as the purest Snow. If the *Tarso* be lean, you may add to the Quantity ten Pounds, or more, of the aforesaid Salt; but this is to be done after making Trial: You ought always to make Trial of the first *Fritt*, by putting it into a Crucible, and setting it in the Furnace; if it grow clear suddenly, you will know whether it be well prepar'd or not, whether it be soft or hard, and whether any more Salt is to be added to it, or to be diminish'd. This *Crystal Fritt* must be kept in a dry Place, where no Moisture is; for by Moisture it will suffer Damage, grow moist, and the Salt of it will run to Water,

and the other Ingredient remain alone, which of itself will never vitrify. This is not to be water'd as the former, but may lie three or four Months; after which it will be much better to put into Pots, and sooner grows clear.

Green Glass Fritt, of which we have yet said nothing, is a Composition made of grosser Materials; to wit, of common Ashes, without any Preparation of them, or else of Goblets ground to a fine Powder, and a hard Sand; this requires ten or twelve Hours baking, more or less, according to the Goodness and Softness, or Hardness of the Sand and Ashes. When the *Fritt* is put into the Melting-Pots, to be made into Glass, in the second, or working Furnace, whether it be Green Glass, White Glass, or Crystal *Fritt*, it is to be melted and kept so long in Fusion 'till it is purified and refin'd, before it is wrought: It purifies itself by sending up a Scum to the Top of it, which is a super-abundant Salt, cast forth from the Metal, and by the Workmen is call'd *Sandiver*, and is to be taken off with the Scumming-Ladle, as the Recrements of the Materials. This *Sandiver* damages the Metal, and makes the Glass obscure and cloudy, being always very foul, and therefore is continually to be scumm'd off, and taken away, as long as any of it rises.

To reduce Glass again into its first Principles; take Glass in Powder, what Quantity you please, Pot-Ashes, as much; mix or melt them in a strong Fire, which immediately put into warm Water, so the Glass will dissolve, the Salt will melt and mix with the Water, and the Sand, &c. will fall to the Bottom; by which it appears that the Fusion of Glass is not the last Fusion, or beyond any Reduction. *Helmont* saith, if you melt Glass in fine Powder, with good Store of *Sandiver*, and set them in a moist Place, all the Glass will soon be resolv'd into Water, whereunto if you add as much *Aqua Regis* as will suffice to saturate the *Sandiver*, you shall find the Sand presently settle to the Bottom, in the same Weight in which it was first put in; for the Salt in the Glass is imbib'd, and taken up by the *Sandiver* and *Aqua Regis*, and so the component Parts, analyz'd into their former Principles.

As to the Way of making Prince *Rupert's* Glass Drops: They are made of green Glass, well refin'd, for otherwise they will not succeed, but crack and break presently after they are dropp'd into Water: The best Way of making them, is to take up some of the Metal out of the Pot, upon the End of an Iron Rod, and immediately let it drop into cold Water, and lie there 'till it is cold; where observe, first, If the Metal be too hot when it drops into the Water, the

Drop will certainly frost and crackle all over, and fall into Pieces in the Water. 2dly, Every one of them that cracks not in the Water, but lies in it 'till it is quite cold, is sure to be good. 3dly, That the most expert Artists know not the just Measure of Heat required, and therefore cannot promise before-hand that the next shall be good, for many of them miscarry in the making, and oftentimes two or three, or more, prove ill for one that hits. 4thly, If one of them be taken out of the Water whilst it is red hot, the small Part of the Tail or Thread it hangs by, so much of it as has been in the Water, will, upon breaking, fall into Dust, but not the Body of the Drop, tho' its Cavities are full as large. 5thly, If one of them be cooled in the Air, or on the Ground, hanging by the Thread, it becomes, in all Respects, like other Glass. 6thly, The Outside of the Glass Drops that are cool'd in Water, is close and smooth, like other Glass, but within it is spongy, and full of Cavities or little Bubbles. 7thly, The Figure of it is roundish, or oval at the Bottom, not much unlike a Pear or Pearl, wreath'd from the Beginning of the Neck as it grows smaller, and terminating in a long Neck, for the most Part bended or crooked. 8thly, If a Glass Drop be let fall into scalding hot Water, it will crack and break in the Water, either before the red Heat is over, or soon after. 9thly, If it be taken out of the Water before it be cold, it will certainly break. 10thly, If they be dropp'd into Vinegar, or Spirit of Wine, or Water in which Nitre or Sal Armoniac have been dissolv'd, or Milk, they never miss to frost, crack, and break to Pieces. 11thly, If dropp'd in Oil-Olive, they do not so frequently miscarry as in cold Water, nor have so large Blebs or Bubbles in them, but some Part of the Neck, and small Threads break like common Glass; and if the Neck be broken near the Body, and the Body held close in the Hand, it breaks not into small Parts, nor with so smart a Force and Noise, as those made in cold Water. 12thly, If you break off the Tip of the Thread, or Neck, of one of those made in Water, the whole will fly immediately into very minute Parts, which will easily crumble into coarse Dust. 13thly, A Blow with a small Hammer, or other hard Instrument, only upon the Body of one of those made in Water, will not break it. 14thly, One of them broke in the Hand, under the Water, strikes the Hand more smartly, and with a brisker Noise than in the Air; but fasten'd in a Ball of Cement, half an Inch in Thickness, upon the Breaking off the Thread, or Tip of it, it breaks the Ball in Pieces like a Granado. Lastly, Some of them being ground

ground upon a Tile, or other Stone, break when the Bottom is a little flatted, and others not 'till half is rubb'd, or ground off.

To prepare white Glafs, or Crystal Glafs, take *Fritt* of ordinary Pot-Ashes, to make a fair, white, common Glafs; but *Fritt* of the best, whitest, and hardest Pot-Ashes, in great Lumps, makes the Glafs, which is call'd *Crystalline Glafs*, not Crystal itself. You must put as much *Manganese* in one Sort as to another; cast the white and Crystal-like Glafs into Water, that you may have them clear in Perfection. You may make them without this casting into Water; yet it is necessary, if you would have them fairer than ordinary; and may be repeated, if you would have them yet more resplendent, and then you may work them into what Vessel you please. To have the Glafs yet whiter, calcine it, that it may purify well, and have but few Blisters; and also add to a hundred Pounds of the *Fritt* twelve Pounds of pure Salt of Tartar, which must be put in when the *Fritt* is made, and so mix'd with Sand Pot-Ashes sifted, and then be made *Fritt* thereof, as before; and so will the Metal be fairer beyond Comparifon.

Of Colouring Glafs.

The calcining Copper or Brass variously for various Colours is done first by *Feretto* of Spain, with thin Copper-Plates laid in Bits upon Sulphur, *Stratum super Stratum*, cover'd, luted, and calcin'd for two Hours, then beaten small and sears'd: Or, 2dly, It is prepar'd with Vitriol instead of Sulphur. 3dly, You may make a Calcination of Brass with Sulphur, thus: Take thin Plates in Bits, which lay upon Sulphur, *Stratum super Stratum*, which calcine for twenty-four Hours; then powder and searse it, and reverberate again for twelve Days; grind, searse, and keep it for use to colour Glafs of a transparent Red, or Yellow. 4thly, Calcine Brass by itself, by putting Bits of Brass Plates into a Crucible, and luting on the Top; this makes Glafs of a Sky-Blue and Sea-Green. 5th, Calcine Scales of Brass *per se*, which if well done will be red. Scales of Brass thrice calcin'd, become of a russet Colour, and will make a Sea-Green, an Emerald, a Turchois, and a beautiful Sky-Blue, with many other Colours.

To tinge Glafs of a Sea-Green; take *Crystal Fritt*, put it in a Pot, without any *Manganese* added; melt it, and take off the *Sandiver*: Being well and perfectly clarified, take of this Crystal twenty Pounds; Brass of the first, third, or sixth Preparation, six Ounces; *Zaffar* prepared, one Ounce and half; mix these two Powders well,

and put to the said Crystal at three Times. At first it makes the Metal swell very much, therefore mix the Glafs with the long Squares; then let it settle, that the Colour may be incorporated for three Hours; then mix again, with the long Squares, and take a Proof thereof. Put in rather too little than too much of the Colour; for then it may be easily heighten'd. At the End of twenty-four Hours, after it has had the due Colour, it may be wrought, mixing it well first from the Bottom of the Pot, that the Colour may be equally mix'd and spread through all the Metal, and united with it, otherwise it settles to the Bottom, and the Metal at Top becomes clear. At *Moran* they take half *Crystal Fritt* and half *Pot-Ash Fritt*, and proceed as before, whence arises a fair Sea-Green, but the former is fairer.

For a Sky-Colour, take *Fritt* made of the best Pot-Ashes, which purify from its *Sandiver*; and to twenty Pounds thereof add Brass, of the fourth Preparation, six Ounces, and put it in at three Times, as aforesaid. At the End of two Hours remix the Metal and make a Proof; being well colour'd, leave it for twenty-four Hours, so will you have an excellent Sky-Colour, varied with other Colours, then work it.

Another Sea-Green, yet more excellent, is thus made: Take *Caput Mortuum* of the *Vitriol* of *Venus*, made without Corrosives, expose it to the Air for some Days, and you draw from it, without any Artifice, a pale green Colour, which being powder'd, to six Ounces of it, add *Zaffar* prepar'd, once Ounce and half; *Chrystal Fritt* purified, as before, twenty Pounds: Work as in the first Green, so will you have the most beautiful Colour of the three.

To make a Gold-yellow in Glafs, or a Kind of Amber-Colour: *Crystal Fritt* two Parts, pure *Pot-Ashes Fritt* one Part, both made of *Tarso*, which is much better than Sand; but if of natural Crystal it is yet better; mix these well together, of which take twenty Pounds; of *Tartar* well beaten and sears'd fine, *Manganese* prepared, of each three Ounces; mix these Powders well together first, then, with the *Fritts*, put them in the Furnace, and let them stand four Days on an ordinary Fire, because they rise much. When the Metal is purify'd and well colour'd, which is at the End of four Days commonly, it will be very fair and beautiful, and is then to be wrought into Vessels, &c. This Colour you may make deeper or lighter, by adding or diminishing the *Powders* or *Fritts*. If you would have it yet fairer and more beautiful, you must take all *Crystal Fritt*: Moreover, another Thing is to be observ'd; you must put the Powder at several Times into the *Fritt*, not into the Metal, for then it colours not. To

To make a black Colour in Glafs: Take Pieces of broken Glafs of many Colours, grind them small, and put to them Powder made of *Zaffar* prepar'd, two Parts; *Manganese* prepar'd, one Part; this Glafs, purified, will be a most admirable Black, shining like Velvet, and will serve for Tables, &c. Another brighter Black: Take *Fritts* of Crystal and Pot-Ashes, of each ten Pounds; Calx of Lead and Tin, of each two Pounds; mix all together, set them in a Pot in the Furnace, well heated; and when the Metal is pure, add six Ounces of Powder made of Steel, well calcin'd; Scales of Iron, finely powder'd, of each equal Parts; let them boil twelve Hours, now and then mixing the Metal, then work it. Another Black, yet clearer, is this: Take of the best *Pot-Ash Fritt* twenty Pounds, *Manganese* prepar'd, one Pound and a Quarter, *Tartar* in fine Powder, six Pounds; mix them, and put them into the Furnace leisurely; let the Metal purify, which will be at the End of four Days; mix again well, then cast it into fair Water, and it will be black beyond any of the former.

To make a fair Milk-white call'd *Lattimo*: Take *Crystal Fritt*, twenty Pounds; calcin'd Lead and Tin, of each three Pounds and a half; *Manganese* prepar'd, one Ounce; mix all together, and put them into a Pot heated, let them stand twelve Hours, that the Materials may be melted; and at the End of eight Hours you may work it. It is a fair White; and to make a Peach Colour of it, add a sufficient Quantity of *Manganese* prepar'd, and it will be a Peach Colour; but you must work it in Time, otherwise it will fade again.

To make a deep Red: Take *Crystal Fritt*, twenty Pounds; Tin calcin'd, two Pounds; broken Pieces of white Glafs, one Pound; mix these well together, put them in a Pot to run and purify them; being melted, add leisurely, one Ounce of this Mixture; Steel calcin'd and ground, Scales of Iron finely ground, of each alike; mix them well together, and in about five Hours it will be perfected; Too much of the Powder makes the Metal black and opacous, whereas it ought to be transparent; if it be too black or deep, put in of the fourth Preparation of Brass, about an Ounce, and mix them many Times, and in about three or four Repetitions it will become as red as Blood: Make several Trials, and when you find it right and good, work it speedily, otherwise it will lose its Colour and become black; you must also leave the Mouth of the Pot open, else the Colour will be lost. Let it not stand above ten Hours in the Furnace, and suffer it not to cool, if possible. If you find the Colour fades, put in some of the Steel and Iron-

scale Powder aforesaid, and it will restore it again; 'tis a nice Colour, therefore speedily to be wrought.

For a transparent Red in Glafs, like Blood, take common white Glafs, twenty Pounds, Glafs of Lead, twelve Pounds; put them into a Pot glaz'd with white Glafs; when the Glafs is boil'd and refin'd, add Copper calcin'd to Redness, as much as you please; let them incorporate, mixing well the Glafs, then add so much Tartar in Powder as will make the Glafs Blood-red: If the Colour be too pale, add more of the calcin'd Copper and Tartar, 'till the Colour is exact. Another transparent Red: Dissolve Gold in *Aqua Regis*, pour Water upon it; then put this Powder of Gold in earthen Pots, to calcine in the Furnace, 'till it becomes a red Powder, which will be in about forty Days; add this Powder by little, in sufficient Quantities, to fine Crystal Glafs, which has been often cast into Water, and it will give a transparent Red, a Ruby Colour.

To make Glafs of Lead: Take of the best Red Lead what Quantity you please, suppose fifteen Pounds; *Chrysal Fritt*, or common white *Fritt* twelve Pounds; mix them as well as may be, and put them into a Crucible with a strong Bottom, which put into two other Crucibles of like Strength, one within another, and put them into a Fire of Suppression. The Lead will pass through the first and second Crucible, and in the third you will find the Glafs. Or thus: Take *Minium* fifteen Pounds; Salt of Pot-Ashes eight Pounds; Sand the same Quantity; mix and put them into Crucibles as before, for fear of breaking; and make a Fire of Suppression, so will you have very good Glafs of Lead. To work the said Glafs of Lead: Before you take it upon the hollow Iron Pipe, let it be a little rais'd in the Pot, then take it out and let it cool a little, and so work it on the Marble, being clean. At first let the Marble be well wetted with cold Water, otherwise the Glafs will scale it, and be itself also discolour'd, incorporating the Scales into itself; and continually wet the Marble whilst you work this Glafs, otherwise it will lose all its Fairness and Beauty; and do this as often as you take the Metal out of the Pot. This Kind of Glafs is so tender and brittle, that if it be not cool'd a little in the Furnace, before it is wrought into drinking Glasses, Cups, or other Vessels, and taken a little at a Time and held on the Irons, and the Marble continually wetted, 'tis impossible to work it.

To make a Gold-yellow in Glafs, of Lead: Take *Crystal Fritt*, calcin'd Lead, or *Minium*, of each sixteen Pounds, mix and searfe them well; add to them Brass thrice calcin'd, six Ounces;

Grecks

Crocus Martis made with Vinegar, forty-eight Grains; put them well mix'd into the Furnace, let them stand twelve Hours, in which Time it will be clear; mix them, and make a Proof. If it be greenish, add a little more *Crocus Martis*, 'till it becomes a most fair Gold Colour.

A transparent Red in Glass is made thus: Take impalpable Powder of the best *Manganese*, refin'd Nitre, of each equal Parts, calcine and reverberate twenty-four Hours, then wash away the Salt with fair warm Water and dry the Powder, which will be of a red Colour; add to it its equal Weight of *Sal Armoniac*, grind them together on a Porphyry with Spirit of Vinegar; then in a Retort, with a large Body and long Neck, sublime in Sand for twelve Hours, break the Glass, and take what is sublim'd to the Neck and Body of the Retort, and mix it with what remains at Bottom, adding as much fresh *Sal Armoniac* as is wanted in the Weight of the first Sublimation; grind, as before, on a Porphyry, with Spirit of Vinegar, and sublime also in the same Manner; repeat this Work so long, 'till the *Manganese* remains all at the Bottom, fusible.

A most excellent Blue to colour Glass: Dissolve Copper in *Aqua fortis* made with Nitre and Hungarian or Roman Vitriol, which sharpens the *Aqua fortis*, and yields some Particles of Copper to it; then precipitate it with Spelter of Zink; this is sometimes done with the Refiner's double Water impregnated with Copper; by this Means you shall have a most incomparable Blue for colouring Glass.

There are almost an infinite Variety of Ways to colour Glass, among which I thought these few might not be unacceptable, to give the Curious a little Insight into this Art, which has of late Years receiv'd such vast Improvement.

[The Plant, from the Ashes of which the Salt for Glass Work is commonly made, is the *Kali Cochleatum majus*. Park. 279. *Kali majus cochleato semine*. C. B. Pin. 289. But that which yields the *Alicant Salt*, the purest and best of all others, is the *Kali Hispanicum supinum Annum sedi foliis brevibus*. Act. Reg. Par. Anno 1717, Pag. 93, Fig. Pag. 98.

The several Things used in Medicine which owe their Origin to *Kali*, are

1. The *Pot-Ashes*, or *Cineres Clavellati* of the Shops.

2. The *Sandiver*, or *Axungia Vitri*.

3. The *Soap Lyè*, or *Lixivium*, made by dissolving the Salt in Water, from which the *Caulstick Stone* is made.

4. *Soap*, which is made of this *Lixivium*, and is treated of in its proper Place.

Beside the Ashes made from the *Kali*, there are the Ashes of the *Rocket*, prepar'd in the same Manner, brought from the *Levant*, and used in the same Manner by the Soapboilers and Glassmakers: And in *Lorrain* they burn the common Female Fern to Ashes in the same Manner, and make a particular Kind of Glass with them, call'd *Fern Glass*, which is generally very light and thin, and of a pale Sea-green.]

The End of the Book of LEAVES.

BOOK the Sixth.

Of FLOWERS.

P R E F A C E.

FLOWERS are the expanded Buds of Vegetables, of various Colours and Figures, in which are generally found their Fruits or Seeds. A Flower is composed of three Parts, the Empalement, or Cup; the Foliage; and the Heart, or Centre.

Besides the Flowers of Plants which we usually sell, I shall comprehend in this Book the Parts of Flowers, and some other Vegetable Substances, which have no regular Place under any of the other Classes of this Work, as the Spikenard, Epythymum, and the like.

1. Of Schœnanth, or Camels Hay,

Pomet. **T**HIS Schœnanth is the Flower of a small Plant, or, more properly speaking, a sweet Rush that grows plentifully in *Arabia Felix*, and at the Foot of Mount *Libanus*, from whence it is brought to us by the Way of *Marseilles*. This Plant is about a Foot high, the Root being knotty and very little, furnish'd with small, hard, long, white Filaments, and from each Root come several hard Stalks, of the Size, Figure and Colour of a Barley Straw; there arise little tufted Flowers on the Tops of the Stalks, the Bottoms of which are of a Carnation Colour; so that when the Rush is in Flower, it is a very fine Plant to look upon. And as this Flower is agreeable to the Eye, so it is to the Palate, having a warm, biting, aromack Taste.

We have brought from *Marseilles* the Flower and the Rush separate from one another, to wit, the Rush in little Bundles, and the Flower just in the Manner as it is gather'd; sometimes clean and neat, and other Times nasty and dirty; which is the Reason why such Apothecaries as are curious in their Drugs, clean and wipe every Flower, which is a troublesome Piece of Work. Chuse such as are the newest, and approaching nearest the scarlet Colour that you can get; tho' they are of no considerable Use in Physick, they are requir'd for the making of the Great Treacle.

When the Flower is scarce People use the Plant in its Place, but when the Flower can be had it ought to be used, as it has much more Virtue.

Fœnum Camelorum, Juncus odoratus Schœnanthus, Schœnanth; the fragrant Lemery. Rush, or Camels Hay, is a Kind of Reed, or Grass, which grows plentifully in *Arabia Felix*, at the Foot of Mount *Libanus*, where it serves the People for Forage and Litter for their Camels. The Stalk is about a Foot high, divided into several hard Stems, of the Size, Figure and Colour of a Barley-Straw, being much smaller towards the Top. The Leaves are about half a Foot long, narrow, rough, pointed, of a pale green Colour. The Flowers growing on the Top are ranged in double Order, small, hairy, of a Carnation Colour, and beautiful to the Eye. The Root is small, hard, dry, knotty, adorn'd with long white Filaments. All the Plant, and particularly the Flower, is of a strong Smell and biting Taste, pungent and very aromack, being preferr'd to all the rest for its medicinal Use; it is incisive, attenuating, deterfive, resists Malignity, is an excellent Vulnerary, provokes Urine, and removes Obstructions.

[The Schœnanth is the *Gramen ad Juncum accedens aromaticum, majus, Syriacum*. Hist. Ox. 3. 229. *Gramen dactylon aromaticum multiplici Panicula Spicis brevibus, tomento candicantibus ex eodem pediculo binis*. Pluk. Phyt. Tab. 109. Fig. 1. It is brought from the *East-Indies* and *Arabia*; many Virtues are attributed to it, but its principal Use



Use at present is as an Ingredient in the *Venice Treacle*, *Mithridate*, &c.

2. Of Provins Roses.

Pomct. **T**HE Roses, call'd *Provins Roses*, are Flowers of a deep Red and velvety, which are brought from *Provins*, a little Town about eighteen Leagues from *Paris*. These Roses grow in such great Quantities about that Place, that it must be allow'd that the Ground there is particularly proper for the raising these Kind of Roses, because in Beauty and Goodness they surpass all that come from other Parts; and that which contributes greatly to their Excellency is, that the Inhabitants thereabout are perfectly skill'd in the drying of them, which makes them keep considerably longer than others, and preserves both their Colour and Smell. We bring now from *Provins* two Sorts, the larger and the smaller, the Goodness of either of which depends on their Colour, Smell, Clearness from little Leaves, Threads, &c. and their Dryness.

Those who make it their Business to deal in large Quantities of *Provins Roses* must preserve them in dry Places, where no Air can enter in, and close press'd or squeez'd, and in such Manner they may maintain their Beauty a Year, or eighteen Months; but about that Time, whatever Care is taken of them, they lose their Colour, and Worms breed in them: Some put old Iron among them, to hinder the Worms from destroying them.

These *Provins Roses* are Flowers much esteem'd by all the World, because they are astringent and cordial, strengthen the Nerves, and other weak Parts of the Body: They are of considerable Use in Physick, and enter several Compositions of Value: But since, of late Years, these *Provins Roses* were dear, several Druggists and Apothecaries have contented themselves with the common red Roses that are cultivated about *Paris* and other Parts, since which Time there has not been that Consumption of these Roses as formerly: Nevertheless, those who have made Use of the other Sort have found, that they are not equal to the true *Provins Rose*, either in Beauty or Virtue; besides which, they will not keep so long, notwithstanding all their Pains to preserve them.

The true *Provins Roses* are so esteem'd in the *Indies*, that sometimes they will sell for their Weight in Gold; beside the great Quantity we sell of these Roses, we also receive them now made into Liquid and dry Conserves, and sometimes Syrups. You must take Care in the Choice of these Things to deal with honest People, for

fear they make their Conserves and Syrups, when old, of a fresh, lively red, by adding Spirit of Vitriol, or other Acids to them: The liquid Conserve is used to strengthen the Stomach, and the dry to stop Catarrhs, Rheums, &c. and also against Gripes and Diarrhæas. The Syrup has the same Virtues with the Conserves, but in a lesser Degree: There is likewise a Conserve made of the white Roses, but it is of little Value. We have from the same Place besides, another liquid Conserve, or Honey of Roses, which is made with the fresh Juice of the *Provins Rose* and Honey boil'd together: This is what the Apothecaries call Honey of Roses.

It is of these Roses we make the best Rose-Water in the World; but it depends entirely on the Honesty of the Distiller, whether he will make all of the pure Rose, or with the Addition of a great deal of Water; and most commonly it is made, as I hinted before, of the Rose-Wood. The Use of this Water is so well known, that I need not waste Time to relate to you the great Consumption that is made, both by the Perfumers and the Apothecaries, and the large Quantities daily used by private Families, upon all Occasions, especially in Diseases of the Eyes, &c. Besides the Water, there is a fragrant and inflammable Spirit made of Roses, which is very proper to refresh and exhilarate the Spirits, as well as to strengthen the Stomach. A white and very fragrant Oil, or Essence, may also be drawn from Roses; but the Dearness of it is the Reason why we sell but very small Quantities of it. The Roses which remain in the Alembick, or Still, after Distillation, and which are found like a Cake in the Bottom, being dried in the Sun, is that which we call *Rose-Cake*; but a Decoction of the Buds being so much better for all Purposes than any thing that can be made from this, it is needless to say any thing farther of it; and the little Use, as well as Virtue, there can be in the Salt made from the Rose, prevents me entirely from saying any thing about it.

Rose, in *French* and *English*, a Rose, is a Flower known through the World; *Lemery*. there are two Kinds of it, one cultivated and the other wild: The Rose-Bush is likewise call'd in *Latin*, *Rosa*; it is a Shrub which bears hard woody Branches, usually beset with strong sharp Thorns; the Leaves are oblong, indented on their Sides, rough in touching, hanging five or seven on the same Stalk; the Flower is composed of several, large, beautiful, fragrant Leaves, supported by a Cup, or Bud, which becomes afterwards an oval Fruit, of the Figure of an Olive, whose Bark, or Covering, is a little fleshy;

fleshy; it encloses, or contains, angular, hairy, whitish Seed; the Roots are long, hard and woody; this Shrub, cultivated or uncultivated, is a Hedge Bush.

The cultivated Rose is distinguish'd into several Kinds; those which are used in Physick, are the Pale, or Carnation Roses; the Musk, or Damask-Roses; the common white and red Roses: The pale Rose, call'd in *Latin*, *Rosæ pallidæ*, seu *Rosæ incarnatæ*, are fine and large, of a pleasant Red, or Flesh Colour, very sweet to the Smell, and that spread their Leaves wide; chuse such of these as are the most single and least furnish'd with Leaves, because the volatile Parts are less diffus'd, and their Smell and Virtue is the greater: They afford a great deal of exalted Oil and volatile essential Salt; are purgative, attenuate, and discharge a Mucus from the Head, purify the Blood, and purge, chiefly, the bilious and ferous Humours.

The Musk Rose, call'd in *Latin*, *Rosæ Moschatae* & *Damascenæ*, are small single white Roses, which blow not 'till Autumn; they have a Musk Smell, very sweet and agreeable; the best and most efficacious are those that grow in the hot Countries, as *Languedoc* and *Provence*; they yield great Plenty of exalted Oil and volatile Salt: Three or four of these Musk Roses being bruised in a Conserve, or Infusion, purge briskly, so that sometimes they occasion Blood; those of *Paris* do not work so strong, but are more purgative than the pale Roses.

The common white Roses, call'd *Rosæ sativæ albæ*, seu *Rosæ albæ vulgares majores*, are large, white and fragrant, a little laxative and deterfive, but are not used otherwise than in Distillations: They contain a great deal of Phlegm, exalted Oil, and but a little essential Salt.

The red Roses, call'd in *Latin*, *Rosæ Rubræ*, seu *Rosæ Provinciales*, are of a fine deep red Colour, but of little Smell: They gather them in Bud, before ever they blow, in order to preserve both their Colour and Virtue, which are destroy'd by the Air, if they are entirely expos'd to it. Chuse those that have the highest Colour; those that grow about *Provins* are the finest and most valued.

The red Roses are used for Conserve, and are likewise dried in great Quantities to keep, because they are employ'd to many Purposes, being well dried, so as to preserve their deep red Colour, as well as the Smell they had when fresh. They are astringent, deterfive, proper to strengthen the Stomach, stop Vomiting, Looseness, Hemorrhages, being taken inwardly: Outwardly, they are used for Contusions, Dislocations, Sprains, of the Hands or Feet, for Bruises, and to strengthen

the Nerves and Joints: They are apply'd in Fomentations, Cerates, Ointments and Plaisters. You ought to observe to gather all your Roses in the Morning before the Sun has got high, for then the essential Parts are, as it were, concentr'd by the Coolness of the Night; otherwise, when the Sun has been upon them, it exhales a considerable Part from them. The little yellow Bodies which are found in the Middle of the Rose, are call'd *Antheræ*; these strengthen the Gums, and are used in the Teeth-Powders. The wild, or Canker-Rose, call'd *Cynosbaton*, I shall speak of in its proper Place.

[The Roses used with us in Medicine are,

1. The Red, the *Rosæ rubra multiplex*. C. B. Pin. 481. *Rosa rubra valde plena*. J. B. 2. 34. This is used in the Bud for Conserve, and dried for Tinctures, &c.

2. The Damask, the *Rosa Damascena flore pleno*. Boerh. Ind. A. 2. 152. *Rosa rubello flore majore multiplicato, sive Pleno, incarnato vulgo*. J. B. 2. 36. These are used for the Damask Rose Water, the *Syrupus rosaceus solutivus*, &c.

3. The White, the *Rosa alba vulgaris major*. C. B. Pin. 482. *Rosa Candida plena*. J. B. 2. 44. This is used for the Distill'd Water. And

4. The Dog Rose, or common Bryar. *Rosa Sylvestris inodora seu canina*. Park. 1017. *Rosa canina inodora*. Ger. 1087. The Fruit of this is used for the Conserve of Heps.

The *Provins* Rose, so much commended here, is the *Rosa maxima multiplex*. C. B. Pin. 481. *Rosa Provincialis sive Hollandica Damascena*. Park. Parad. 413. It is common in our Gardens, but we make no Use of it. The Musk Rose is the *Rosa Moschata simpliciflora*. C. B. Pin. 482. *Rosa Moschata simplex*. Park. Parad. 417, which is common in warmer Countries, but never used with us: and the *Rosa Pallida* of the Shops is but a Variety of the common Damask Rose. The *Bedeguar* of the Shops is the spongy Substance frequently found on the Stalks of the Briar. And the *Antheræ* are the yellow Chives within the Flower of the Red Rose.]

3. Of Saffron.

THE Saffron, which the *Latins* call *Crocus*, because of its reddish Colour, is the Chive, or Thread of a Flower, of a very beautiful red at one End, and yellow at the other, which is brought from several Parts.

That which bears the Saffron is a bulbous Root, almost like that of the great Shalot, except that it is a little rounder, and of a Colour something redder, from whence arise Stalks, adorn'd

adorn'd with long, green, narrow Leaves; at the End of each Stalk comes a deadish-blue Flower, in the Middle of which are three little Threads, which is what we call *Saffron*.

The best *Saffron*, and which is most valued, is that of *Boistue* in the *Gatinois*, where it is husbanded with great Care, being almost all the Riches of the Country. They plant the Onions, or Bulbs of *Saffron*, in Spring-Time, in Rows like the Vines, in the Earth: The first Year it brings nothing but the Herb, or Leaves, which remain green all the Winter long, 'till the Beginning of Summer, after which the Leaves fall or dye. The second Year it returns with a Flower, in the Middle of which there are three little reddish Threads, which are the *Saffron*; when it is ready to be gathered, which is in *September* and *October*, they gather it before the Sun rises, and then they retire with what they have got; and after it is clean they lay it upon Hurdles, or Bake-Stones, under which is a little Fire to dry it: The next Day they return to gather such as sprung afresh since the other was got; for it is a wonderful Thing that these Bulbs recover again in four and twenty Hours, and continue several Days to be gather'd and dry'd, 'till the Roots will yield no more.

There grow in *France* several other Sorts of *Saffron*, as that of *Orange*, *Toulouse*, *Angouleme*, and of *Menille* in *Normandy*; but the last is the worst of all, and none of the other three are so fine as the true *Gatinois*, for which Reason it is preferr'd before all the rest: And to have the requisite Qualities, it ought to be well dry'd, of a beautiful Colour, long and large, well tufted, of a fine red, good Smell, with the fewest yellow Threads possible, and not smelling either burnt or musty.

Saffron is much used in Medicine, being one of the best Cordials we have. It serves for several Uses, because of its yellow Dye. The *Germans*, *Dutch* and *English* are such Admirers of the *Gatinois Saffron*, that they transport great Quantities of it every Year in Times of Peace, into their own Country. [Here our Author's Love for his Country, or Ignorance of the Goodness of English *Saffron*, which is preferable to any in the World, has led him into a palpable Mistake.]

As there is a great deal of *Saffron-Powder* sold, so it is generally a Cheat upon honest People, that being almost only sold in Powder, which has been used beforehand by the Druggist or Apothecary, to make Tinctures, Spirits, and the like, with. We have *Saffron* brought from *Spain* that is good for little or nothing; they spoil it entirely through their Ignorance, which makes them believe that the *Saffron* will not keep without it

be put in Oil. The Antients made *Pastilles* with *Saffron*, Myrrh, Roses, Starch, Gum Arabick and Wine; formerly they were brought from *Syria*, and used for sore Eyes, and to provoke Urine. This Paste, or Troche, was call'd *Crocomagma*, and by us *Pastilles*, or *Saffron Troches*; but this Remedy is little known or used at present. There may be a Salt and Extract made from *Saffron*, but the Dearness of them is the Reason there is but little made: The Tincture made with Spirit of Wine is used in Hysterical Cases, given in any convenient Liquor, from four to twelve, or more Drops.

4. Of Bastard-Saffron.

Bastard-Saffron is a very common Plant, which grows about two Feet high, furnish'd with Leaves that are rough, pointed, longish, green and slash'd; at the End of each Branch arises a husky Head, of the Bigness of one's Thumb's End, of a white Colour: From this Head come several red and yellow Filaments, or Threads, which is what we call *German Saffron*, *Bastard-Saffron*, or *Flowers of Carthamus*: But as they do not trouble themselves to propagate this at *Paris*, we have it brought from *Alsace*, and both Sides the *Rhine*, where they cultivate it carefully. It grows also plentifully in *Provence*, and other Places.

This *Saffron* is in great Vogue among the Feather-Sellers, and for making *Spanish-red*; but has no Use in Physick, except in its Seed, which the Apothecaries use, after having cleans'd it well, in the Composition of their Tablets of *Diacarthamum*, which it is the Basis of. Chuse such Seed as is heavy, well fed, clean, new and dry, as can be got, and see that it be not mix'd with Melon, or Gourd-Seed; to distinguish betwixt which, know that the true *Carthamus* is round at one End, and pointed at the other; besides that, it is never so white as the Melon-Seed.

5. Of Saffranum, or the Less Bastard-Saffron.

THERE is another *Bastard-Saffron*, brought from the *Levant*, about *Alexandria*, &c. which is in little Threads or Chives, extremely fine and small, curl'd and reddish.

This *Saffron* is also a Kind of *Carthamus*, which differs not from that afore, but only as it is much less. We chuse this Flower of the highest Colour and finest Red; and likewise as fresh as we can meet with. The Use of it is for the

Dyers about *Lyons* and *Tours*, where they consume the greatest Quantity of it, to make their fine Colours, as the bright *Spanish* Carnation, and the like.

Crocus, or *Crocus Sativus*, according *Lemery*. to *Tournefort* and *Baubinus*, in *English*, *Saffron*, is a Plant which bears several long Leaves, very narrow, and furrow'd. It springs about the End of *August*, or Beginning of *September*, with a low Stalk, or rather Foot, which supports a single Flower, something resembling that of the *Colchicum*, or disposed like a *Flower de Lis*, but much less, being divided into six Parts, of a blue Colour, mix'd with Red and Purple; in the Middle of which Flower rise three small Threads, in the Nature of a Tuft, but divided, and of a fine Colour and Smell, which, when gather'd and dried, is the *Saffron*.

The Root of it is a Bulb as large as a Chestnut, and sometimes bigger, fleshy, sweet to the Taste, and cover'd with white or ash-colour'd Tunicles or Coats, supplied externally with a great many Fibres, whereby 'tis fasten'd to the Ground. They cultivate this Plant in several Parts of *France* [as observ'd by *Pomet*,] but the best is that of *Gatinois*, and the worst from *Normandy*. Chuse your *Saffron* new and fresh, that is well dried and oily; but take Care that it be not artificial, by keeping it in oily Skins or Bladders, as is used by some. Let it be of a red Colour, with as little Yellow among it as may be. It abounds with an exalted Oil, mix'd with volatile Salt; and is cordial, pectoral, anodyne, hysterick, alexiterial, aperitive, used sometimes as a Restorative in our Food, and in Collyries, to preserve the Eyes in the Small Pox. It enters the Composition of some Plaisters, particularly *Oxycroceum*, but is chiefly used internally.

[The Plant which produces the *Saffron* is the *Crocus Sativus*. C. B. Pin. 65. *Crocus sativus autumnalis*. Park. Parad. 167. The best *Saffron* in the World is that of our own Growth. It is excellent to enliven the Blood, remove Obstructions of the Viscera, and expell the morbid Humours in malignant Fevers. It is said that in *Hungary* and *Poland* they eat it as a Cordial, sometimes an Ounce or more at a Time; but taken in excessive Quantities with us, it brings on Convulsions, Deliriums, and Death, if not prevented. Its usual Dose in Powder is about six Grains, and in Tincture half a Dram.

The *Bastard-Saffron* is the *Carthamus five Crocus*. J. B. 3. 79. *Carthamus officinarum flore Croceo*. Tourn. Init. It is cultivated in some Places, and flowers in *July*. The lesser Kind differs from this only in its Place of Growth and Manner of curing.]

6. Of *Balaustine*, or the wild *Pomegranate*.

THE *Balaustines* are Flowers of the wild *Pomegranate*, which are *Pomet*. brought from several Parts of the *Levant*. We sell two Sorts of *Balaustines*, namely, the fine and the common. We mean by the fine the Husks, together with their Flowers; the common have nothing but the Husk. The *Balaustines* have Use in Medicine, as they are powerful Astringents; make choice of such as are fresh, well supplied with Flowers of a deep Colour, that is, a fine Velvet red, as little mix'd with Chaff and Dirt as possible. The common Sort are not worth Regard, being in a Manner wholly useless.

As to the domestick *Pomegranate*, we never sell the Flowers of it, but we have Plenty of the Fruit brought from *Provence* and *Languedoc*, as a Fruit that is very agreeable to eat, as well as useful in Physick, the Juice serving to make a Syrup with. We sell principally the Rind of the *Pomegranate*, as being an Astringent; but take Care that it be well dried, and does not smell musty: For the most Part of those who sell *Pomegranate-Bark*, sell nothing but such as hath been dried whole, without emptying, and when they are so dried, and come to be used, they have such an ugly Taste, that they are rather fit to make one sick than relieve one.

We sell also what is call'd a dry'd Conserve of *Pomegranate*, which is nothing else but a little melted Sugar colour'd, with the Addition of a little *Cochineal*, Cream of Tartar, and Alum. This Conserve is difficult to make, because of the small Quantity of Alum which is oblig'd to be mix'd with it; and there is nothing in the World more contrary to Sugar than Alum; which shews the Error of those who say that they mix Alum with Sugar to refine it; and what we here assert is so true, that four Ounces of Alum is capable of hindering two thousand Weight of Sugar from incorporating. But to come to our Conserve. It is advisable to keep but little Quantities of it, for there is but little Demand for it, and when it grows moist there is no recovering it to its Consistence again, as we can other Things of that Kind, because of the Alum. In a Word, Alum is to Sugar as Oil to Ink.

Punica Malus, or the *Pomegranate*, is a Shrub, whereof there are two *Lemery*. Kinds, one cultivated, or domestick, and the other wild. The first is call'd by *Tournefort*, &c. *Punica quæ malum Granatum fert*, that which produces the *Pomegranate*; by *Parkinson* and *C. Baubinus*, it is call'd *Malus Punica sativa*:
The

6



Wild Pomegranate.



Domestic Pomegranate.

7

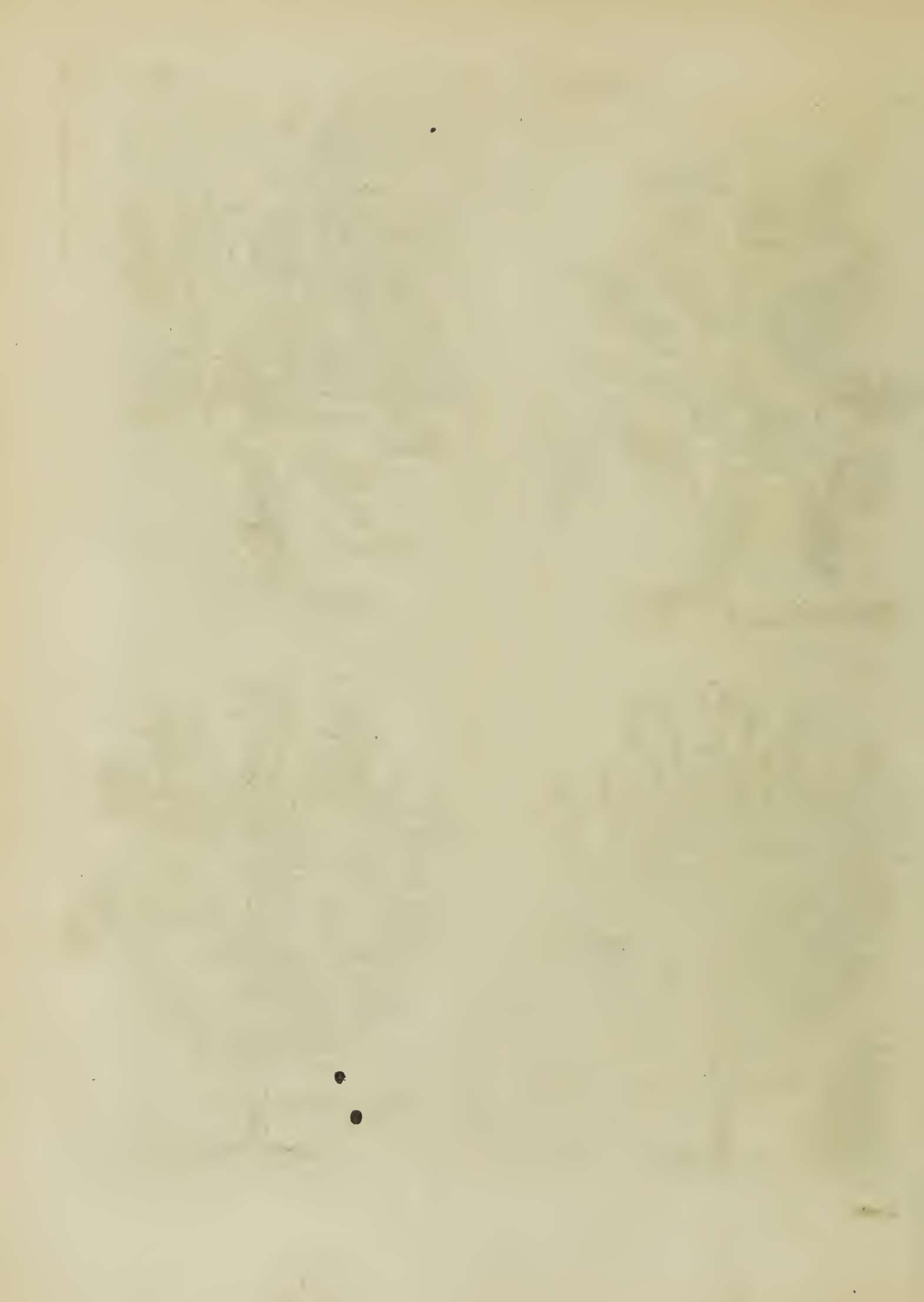


Arabian Stachas.

entire
flower of
Stachas



Citron or Yellow Stachas.



The Branches are small, angular, arm'd with Thorns; the Bark is reddish; the Leaves are small, and resemble those of the Myrtle, but less pointed, hanging by reddish Stalks; of a strong Smell when they are crush'd or bruised. The Flower is large, beautiful and red, inclining to purple, composed of five Leaves, like a Rose in the Hollow of a Cup, representing a little Basket of Flowers: The Cup is oblong, hard, purplish, large at the Top, having, in some Measure, the Figure of a Bell; they call it *Cytinus*. At the Bottom comes a Fruit after the Flower is gone, which grows into a large round Apple, adorn'd with a Crown, form'd by the Top of the Cup; the Bark is as hard as Leather, of a purple Hue, dark without and yellow within. This Apple is call'd in *Latin*, *Malum Punicum*, seu *Granatum*, the *Pomegranate* in *English*. It is divided internally into several Partitions full of Seed, heap'd one upon another, being fleshy, of a fine red Colour, abounding with a very pleasant Juice, each of which contain, in the Middle of them, an oblong Grain, yellow, and sometimes very irregularly form'd.

There are three Sorts of *Pomegranates*, which differ in Taste; the one Sort are aigre, or sharp, the other sweet, and some are betwixt both; manifestly neither the one nor the other prevailing, call'd vinous. These *Pomegranates* are improved in our Gardens, especially in all the warm Countries, as *Spain*, *Italy*, *France*, &c.

The second Sort is call'd *Punica Sylvestris*, the wild *Pomegranate*. This is a Shrub like the former, but more rough and thorny: They gather the Flowers when in their Prime; and they are what they call *Balaustia*, or *Balaustines*; these are dry'd to keep, which the Merchant brings from the *Levant*. The wild *Pomegranate* grows only in the hot Countries, contains in it a good deal of Flegm, Oil, and essential or acid Salt.

The *Balaustines* ought to be chosen new, large, fair, well blown, of a deep Colour, or reddish purple, affording Plenty of volatile Salt and essential Oil. They are proper for Bloody Fluxes, *Diarrhœa*, Ruptures, to stop a *Gonorrhœa*, Whites in Women, and spitting of Blood. The Bark is used for the same Intentions.

The Juice of the *Pomegranate*, which is sharp or acid, is most valued in Physick, as proper to fortify the Stomach, stop Vomiting and Looseness, precipitate Bile and Choler: The Seed is likewise astringent, and used in Injections. There is found upon the Rocks in the Sea, a Stone, in Shape of an Apple, which both in Figure and Colour resembles this, and therefore is call'd a Sea *Pomegranate*.

[The *Pomegranate-Tree*, which bears the Fruit,

is the *Malus punica sativa*. C. B. Pin. 438. *Granata Malus*. Mont. Ind. 42. This is a wild Tree in hot Countries, though only to be seen in Gardens here. It flowers in May.

The *Balaustine-Tree*, which produces the Flowers of that Name, is the *Balaustia Hispanica*. I. B. 1. 82. *Balaustia flore pleno majore*. C. B. Pin. 438.

The Flowers of the first Kind are sometimes used, and are call'd *Cytini*; but they are seldom to be seen in the Shops, as the *Balaustines* are esteemed so much the better Medicine.]

7. Of Arabian Stœchas.

THE *Stœchas*, very improperly call'd the *Arabian Stœchas*, as most *Pomet.* of that which we sell is brought to us from no other Part than *Provence* and *Languedoc*, where it grows plentifully, is the Flower of a Plant which has very narrow green Leaves; this Flower comes in the Nature of a Spike, of the Size of one's Finger's End, from whence arise little blue Flowers, almost like a Violet.

Part of the *Stœchas* we sell comes from *Marseilles*, by reason of the Plenty they have in the Isles of *Hyères*, which were heretofore call'd *Stœchades*, and probably gave their Name to this Flower. The little Use this Flower is of in Physick, makes it that we sell but small Quantities, which makes it generally old, and of little or no Taste, Smell, or Virtue.

There is another *Stœchas* we sell besides, whose Flowers are of a Citron Colour, to which some have given the Name of the *Yellow Amaranthus*; but the little Use that is made of it, gives me no Encouragement to say any Thing further, but that it is a very common Plant in *Provence* and *Languedoc*. The *Arabian Stœchas* grows so large and thick in *Spain*, that it is found as big as one's little Finger, and the Spikes or Heads sometimes white. The chief Use of it is for Treacle, wherein there needs no farther Direction but to chuse it fresh, good, clean and neat.

Stœchas Purpurea, according to *Bauhinus* and *Tournefort*, is a beautiful *Lemery.* Plant, which bears, in the Nature of a Shrub, several Stalks, of a Foot and a half, or two Feet high, woody, and divided into several Branches. The Leaves are like those of *Lavender*, but much less, narrower, and whiter. The Tops support or carry Ears, or husky Heads that are oblong, mounted each on a Cluster of Leaves, and adorn'd with little Flowers, purple or bluish, disposed in Rows the Length of the Head. There succeeds to each of the Flowers four

four Seeds, that are almost round, blackish, and enclosed in a Covering, which serves as a Cup to the Flower. The Roots are woody. All the Plant has an aromattick Smell, with a Taste something acrid and bitter. It grows in great Plenty in *Languedoc*, *Provence*, and the Isles of *Hyeres*, call'd by the Antients the *Stæchas Islands*. It delights in dry and sandy Ground, and is brought dry to the Shops, where the Flowers are only used. It is call'd *Arabian Stæchas*, because the greatest Quantities are brought from thence. It is attenuating, deterfive, aperitive, cephalick, hysterick, strengthens and comforts the Brain, provokes Urine and the Terms, resists Poison, and expels Melancholy.

Some say this Plant grows near the *Rhine*, that it has a pretty large Flower, much in the Shape of Hops, of a fragrant Smell when growing, yellow and bluish, but when dried of a brown Colour, and in Knobs. Those which are the largest, best scented, and least broken, are the best. These Flowers are diaphoretick and vulnerary, used chiefly in Diseases of the Head and Nerves, and by their Fume they dry up De-fluxions. They may be used in Powder, from a Dram to two Drams. A *Lixivium*, or Lye, of the Ashes, in fair Water, will kill Lice and Nits in the Head. The Spirit of this Flower is reckon'd excellent against all cold Diseases of the Womb, Wind, Gripes and Convulsions; and exceeds *Hungary Water* internally or externally. The Syrup of *Stæchas* is given in Coughs, Catarrhs, Barrenness.

[These are the Flowers of the *Stæchas Arabica* vulgo dicta. J. B. 3. 277. *Stæchas purpurea*. C. B. Pin. 216. The Plant is common in *Spain* and *France*; it is cephalick and deobstruent.

There is another Species of this Plant that has a Place in the Catalogues of Officinal Plants, and is there call'd *Tragium alterum*, which is the *Tragium alterum Dioscoridis quibusdam foliis Trichomanis*. J. B. 3. 279. *Stæchadi serratæ Affinis*. C. B. Pin. 216. The Root of this is accounted an Astringent, but is seldom seen or heard of.

The Yellow is the *Stæchas citrina tenuifolia Narbonensis*. J. B. 2. 154. *Elichryson sive Stæchas citrina angustifolia*. C. B. Pin. 264. The Flowers of this are accounted good in Obstructions of the Viscera and King's Evil, but they are seldom used.]

8. Of Rosemary,

Pomet. **R**osemary is a Plant so common, it would be a needless Thing to give a Description of it, but the considerable Sale there is of what is produced from it, engages

me to treat of it. Therefore I shall begin with the Oil, which is made from the Leaves and Flowers, by Means of an Alembick, with a sufficient Quantity of Water; from which, by the Help of Fire, we have a white, clear, penetrating and fragrant Oil, indowed with a great many excellent Qualities: But the Dearness of this Oil, by reason of the small Quantity that it yields, occasions certain People to adulterate it, by mixing a considerable Part of Spirit of Wine, well deflegmated, with it, or else they sell instead of it, Oil of Spike, Lavender, and other aromattick Oils; though it is easy to distinguish Oil of *Rosemary*; as being white, clear, and transparent; of a sweet Smell, and very penetrating.

The Use of this Oil, which is call'd the Essence or Quintessence of *Rosemary*, is not very considerable in Medicine; but it is very much used by the Perfumers, to aromatise their Liquors, Wash-Balls, &c. Some esteem it greatly for the Cure of Wounds, as a very specifick Balsam, which has given occasion to some Strollers and Mountebanks to make it a mighty Commodity, and swear that theirs is true Oil or Essence of *Rosemary*; when what they sell for it is nothing but Oil of Turpentine and Pitch, melted together, and colour'd with Alkanet.

The next Merchandize we sell that comes from *Rosemary*, is the Queen of *Hungary's Water*, which has made such a Noise in the World for so many Years together, and is pretended to be a Secret deliver'd by a Hermit to a certain Queen of *Hungary*. The great Virtues appropriated to this Water must be owing to the Spirit of Wine and *Rosemary* Flowers, from which two Things it is only made. There are a thousand Cheats imposed upon the World by those who pretend to have the true Receipt of making the right *Hungary-Water*: And these are the People, generally, that spoil this Medicine, by making it of the worst Materials, and in ordinary coarse Vessels; as their Manner is to take the whole Plant of *Rosemary*, infuse it in *Aqua Vitæ*, or common Spirits, and so distil it in an Iron Pot, with an Earthen Cap fix'd to it. You have it describ'd at large, and the best Method of preparing it, by Mr. *Verni*, Apothecary of *Montpellier*, in his *Pharmacopæia*, or Treatise of distill'd Waters, pag. 829. and Mr. *Charas*, in his *Pharmacopæia*, pag. 632.

The Use of *Hungary-Water* is so universal, and the pretended Virtues so many, that it wou'd be endless to attempt to enumerate them; besides, there are so many Treatises take Notice thereof, that it wou'd be a Work altogether needless.

We likewise sell the dry'd Flowers, and Seed and Salt of *Rosemary*, but in little Quantities.

We

8



Rosemary.



Lavender.

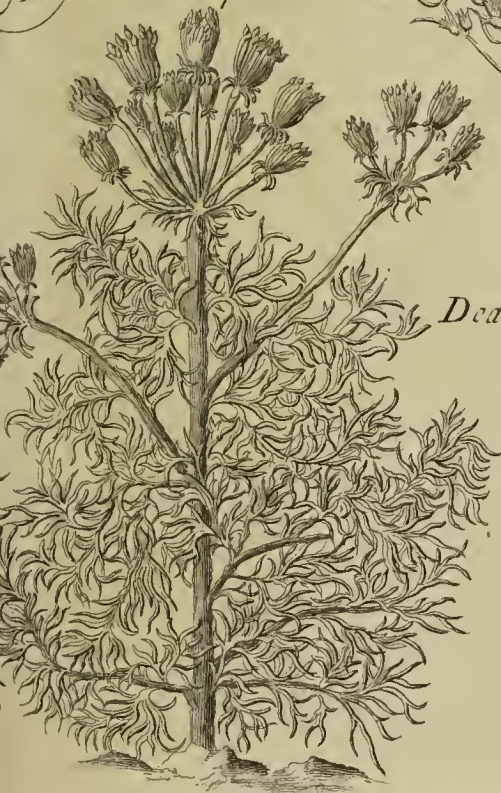
9



Dedder of Thyme.

12

*11
Isagogue or Toothpick Flower.*



Pansies or Hearts Ease



We have likewise a liquid Conserve of the Flowers. Besides the Oil of *Rosemary*, they bring us from *Languedoc* and *Provence* Oil of Spike, which is made of the Flowers and the small Leaves of a Plant which the Botanists call *Spica*, *five Lavendula mas, vel Nardus Italica, aut Pseudo-Nardus*, which signifies Spike, male Lavender, *Italian*, or Bastard-Nard: These grow common in *Languedoc* and *Provence*, and upon all the Mountains thereabout. This Oil is frequently adulterated; and many People sell for it Oil of Turpentine, colour'd with a little Petroleum.

This Oil of Spike is proper for several Sorts of People; as Painters, Farriers, and others; besides its Use in Physick, wherein it is accounted cephalick, neurotick, cardiack, stomachick, and uterine; a great Strengtheners of any weaken'd Part, especially the Head or Nerves; excellent against Vertigoes, Lethargy, Apoplexy, Epilepsy, Palsy, Convulsions, Syncope, Fainting Fits, Palpitation of the Heart; a good Specifick to strengthen the Eye-Sight, and open Obstructions of the optick Nerves, cure a stinking Breath, and relieve in the Spleen and Jaundice. We have from the same Places the Oils of Lavender, Marjoram, Thyme, Sage, Mint, and other aromatick Plants.

Rosmarinus hortensis angustiore folio, *Lemery*. according to *C. Bauhinus* and *Tournefort*; or, the Garden Rosemary with the narrow Leaf. This is a woody Shrub, whose Stalk grows four or five Feet high, and sometimes much more, having several long Branches, ash-colour'd, on which grow long narrow Leaves, that are hard and stiff, of a brownish Green without, and whitish underneath; a little succulent, of a strong Smell, aromatick, and of a pleasant agreeable biting Taste. The Flowers are small, but numerous, mix'd among the Leaves, each of which has a Tail cut at the Top into two Lips, of a pale blue Colour, inclining to white, of a sweeter Smell than the Leaves. When the Flowers are fallen, there follow some little Seeds, that are almost round, join'd four together, and enclosed in a *Capsula*, or Covering, which serves as a Cup to the Flower. The Roots are small and fibrous. They cultivate this Shrub in Gardens, but it grows without Improvement near *Narbonne* in *Languedoc*, and flowers in *May* and *June*. The Flower is call'd *Anthos*, which is as much as to say the Flower, by way of Excellence. Both the Leaf and Flower are used in Medicine; but those of *Languedoc* are to be valued before any of the more Northern Parts of *France*, because the Heat of the Climate renders the Plant there more spirituous and bitter. It yields a large Quantity of essential Oil and volatile Salt, be-

sides fix'd Salt, which it affords great Plenty of, by burning to Ashes, making a Lye of them, then filtering, and afterwards evaporating in a Sand Furnace to a due Dryness.

[The Official *Rosemary* is the *Rosmarinus coronarius fructicosus*. J. B. 2. 25. *Rosmarinus hortensis Angustiore folio*. C. B. Pin. 217.

The Plant from which the Oil of Spike is made, is the *Lavendula minor five Spica*. Ger. 468. *Pseudo-nardus quæ Lavendula vulgo*. J. B. 3. 282. This is a smaller Species of Lavender; but is not that Kind commonly known here by the Name of Lavender, and used in the *Spiritus Lavendula Compositus*, &c. That is the Flower of the *Lavendula major five vulgaris*. Park. 72. *Lavendula latifolia*. C. B. Pin. 216. and indeed is the most fragrant of all the Kinds.]

9. Of Dodder of Thyme.

Epithymum is a Plant like a Bush of Hair, found upon Thyme, *Pomet*. from whence it took the Name of *Epithymum*, or Thyme-Weed. We sell two Sorts of it, to wit, the *Epithymum of Candia*, and that of *Venice*: The first in long Threads, of a brownish Colour, and pretty aromatick Smell. The second Sort, on the contrary, is very little, and curled, and has a great deal stronger Smell than the other. There is a third Sort of *Epithymum*, which our Herbarists sell by the Name of *Country Epithymum*; but this ought to be entirely rejected, as it is good for nothing at all, having neither Smell nor Taste, which is the very reverse of the two former, which you ought to chuse fresh, odoriferous, and the least bruised that can be. This *Dodder* is of some Use in Physick, as it is warm, desiccative, and aperitive; besides which it enters into several *Galenical* Compositions.

There is another Kind of a Plant we sell, which we call *Cuscuta Podagra*, *Angina Lini*, *Dodder*, *Whitwinde*, *Gout-Herb*, &c. This Plant is the same Thing with the *Epithymum*, having no Difference; but according to the Plants it grows upon it changes its Name. And to prove what I say, I shall relate what *M. Tournefort* wrote to me on this Subject.

The *Cuscuta*, says he, is a Plant of a singular Kind: It comes from a very small Seed, that produces long Threads or Strings, that are as fine as Hairs, which perish very soon, as also does the Root, unless there are some Plants near it, for it to twist itself about; they catch hold of the Stalks or Branches of any such, and draw their Nourishment from the Bark of the Plant. It bears several Flowers, at Distances, gather'd into Balls:

The

The Flowers are like little Cups, white, tending to a Flesh Colour, cut into four Quarters, in each of which is a round *Capsule*, membranous, and fill'd with four or five Seeds, small, brown, or greyish, as little as Poppy-Seeds.

This Plant grows indifferently on all Sorts of Herbs, and there are above a hundred Plants to which it clings; and it is believ'd, that as it receives its Nourishment from those Plants which it surrounds, it likewise partakes of the same Qualities. The *Dodder* that grows upon Flax, or Flax-Weed, is what we generally use and mean by *Cuscuta*, as that which grows upon Thyme is the *Epithymum*. It corroborates, opens Obstructions of the *Viscera*, and passes by Urine.

Epithymum, *sive Cuscuta minor*, is a *Lemery*. Kind of *Cuscuta*, or *Dodder*, that is stringy, and winds itself upon any Plant it approaches, being of a reddish brown Colour, and having a pleasant fragrant Smell; that which has fewest Stalks in it is to be prefer'd. By seeing how *Dodder* grows upon Nettles, Hemp, &c. we may apprehend what it is like. It is brought to us out of Turkey, Italy, Venice, and other Pars of the *Streights*. It is reckon'd amongst Catharticks, and said to purge watry Humours and Melancholy; is aperitive, arthritic; purifies and cleanses the Blood; is good for the Spleen and *Hypochondria*, Wind, Rheumatism, and Gout, being beaten to Powder, or taken in Infusion in Water, Wine, or Whey.

[The *Epithymum* is the *Cuscuta minor*, Tourn. Inst. 692. *Cuscuta minor*, *sive Epithymum*, Buxb. 89. and the common *Dodder*, the *Cuscuta*, *sive Cassutha*, Ger. 462. *Cassutha*, *sive Cuscuta*, J. B. 3. 266. Neither of them are at all used in the present Practice.

10. Of Spikenard.

Spikenard, or *Indian Nard*, is a Kind of Spike of the Length and Thickness of one's Finger, adorn'd with little brown Hair, or Nap, that is rough, coming from a small Root of the Size of a Quill. They say that the *Spikenard* grows in Tufts or Bushes close to the Ground, and that it raises a slender, long Stalk; but as I never saw it growing, I have set it down in the Manner as we sell it, according to the Figure engrav'd with the Root, to shew that the Root is not so small and slender as Authors wou'd make it. As I have Pieces like that I had the Figure engrav'd from, which I found among the *Spikenard* I keep for Sale.

We sell three Sorts of *Spikenard*, namely, the *Indian Spikenard*, so call'd, because it comes from *India*, whereof there are two Sorts, *viz.* the

great and the Small. The second is the *Mountain-Spikenard*, which is brought from *Dauphiny*. And the third is the *Celtick-Spikenard*. The small *Indian Spikenard* is according as it is express'd in the Figure; it is of a bitter Taste, and a strong disagreeable Smell; and the large is of the Length and Thickness of one's Finger, and much of the same Quality with the other; it is usually brown-er, and more upon the red.

As to the *Celtick Nard*, it is in little shelly Roots, full of pretty long Fibres, from whence arise little long Leaves, that are narrow at Bottom, and large towards the Middle, and a little sharp at the End; of a yellow Colour, something upon the red; when they are dry'd, and brought to us, they are fit for transporting. In the Middle of the Leaves comes a little Stalk, about half a Foot high; at the End of which are many small Flowers, of a Gold Colour, shap'd like Stars. This *Spikenard* is brought us in Bunches from different Parts, but the greatest Plenty comes from the *Alps*, from whence we have it by the Way of *Marseilles* or *Rouen*. The Use of this is only for the great Treacle, where it undergoes a long and difficult Preparation; for they are forc'd to put this some Time in a Cellar to make it moist, that its little Root may be the easier clean'd, which is the only Part put into the said Composition. One ought to take Care of several little extraneous Plants, which are usually found mix'd with it; as *Bastard Spikenard*, *Hirculus*, or the like. Chuse all the Kinds as fresh and fragrant as possible.

The great *Indian Spikenard* should never be used but when the little one is not to be had; the Mountain Kind ought to be entirely rejected.

Nardus Celtica, or *Spica Celtica*, is a little knotty Root, yellowish and aromatick, being form'd like an Ear, from whence it takes the Name of Spike or *Spica*. It bears fine small Fibres, or slender Tails, pretty long, which support small oblong Leaves, narrow at the Bottom, large or broad in the Middle, and ending in a Point of a yellow Colour; there rises among the Stalks a little Stem of about half a Foot high, bearing on the Top a good many Flowers in Form of Stars: It grows in the *Alps*, *Tyrol*, *Liguria*, *Carinthia*, *Styria*, &c. That is best which is fresh, sweet-scented, with many small Fibres, full and strong, or not brittle; it is hot and dry, and of the Nature of the *Indian Spikenard*, but not altogether so strong; it strengthens the Stomach, expels Wind, is good against the Cholick, and provokes Urine; it may be given in Powder, from a Scruple to a Dram, and in Tincture to half an Ounce.

Nardus



Little Indian Spicknard.



Celtick Spicknard.



Great Indian Spicknard.



French

Spicknard.



Spicknard.

Beauquain



Spicknard without roots

Hirculus.



Nardus Indica, or *Spica Indica*, the *Indian Spikenard*, is a Kind of Ear as long and thick as one's Finger, light, and supplied with long Threads, or Hairs, that are reddish, not brown, of a strong, unpleasant Smell: It grows in *India*, and is brought thence to *Alexandria* in *Ægypt*, and from thence to *Venice*, and so hither; and is call'd *Spica*, because it resembles an Ear of Corn. There is a Bastard *Spikenard*, which is a Sort of Lavender; a second Sort of *Narbonne*; and thirdly, a Mountain *Spikenard*, like *Valerian*. When you chuse the *Indian Spikenard*, let it be such as is dry, of a yellowish red, or Cinnamon-Colour, fresh, smooth, with a long Beard, or Fibres, and a sharp Spike, biting on the Tongue, sweet-scented like *Cypress*, and keeping its Scent long. If it be moist or whitish, or rough, and without Hairs, and Fibres like Wooll, it is naught: It is hot, cephalick, stomachick, and alexipharmick; attenuates and astringes; stops Fluxes, yet provokes Urine and the Terms, powerfully expels Wind, and cures the Jaundice; it resists the Malignity and Poison of the Plague, and all Manner of malign and pestilential Fevers: It is used in Powder, besides its being an Ingredient in *Mithridate*, *Venice Treacle*, and other Antidotes. Its Dose is from half a Dram to a Dram and a Half; and there may be an excellent compound Oil made of it, with the Addition of other Spices.

[The *Indian Spikenard* is the Root and hairy Fibres of the wither'd Leaves of the *Gramen Cyperoides aromaticum Indicum*, Breyn. Prodr. 2. 53. It is brought to us from the *East-Indies* and *Egypt*.

The lesser Kind of this, mention'd by *Pomet*, differs in nothing from the larger, but that it is the Root of the younger and smaller Plants, and for that Reason is commonly the stronger scented.

The *Celtick Spikenard* is the Root with the first Leaves of the *Nardus Celtica Dioscoridis*, C. B. Pin. 165. *Nardus sive Spica Celtica*, Park. 117.

And the *Mountain Spikenard* the Root and Leaves of the *Valeriana Nardus dicta radice Olivari*, Hist. Ox. 3. 103. *Nardus Montana tulerosa*, Park. 116. This is suppos'd to have the same Virtues with the *Celtick*, but is but little used.]

11. Of Bisnague, or Tooth-Pick-Flower.

Pomet. THE *Bisnague*, or *Visnague*, is the Tufts and Tassels of a Plant where-
of you have the Figure under that Name, which grows plentifully in *Turky*, from

whence we have it brought to sell. This Plant is cultivated in several Parts of *France*, but chiefly in the Royal Garden at *Paris*. Of the whole Plant we sell nothing but the Tassels, because the People of Quality, in Imitation of the *Turks*, use them as *Tooth-Picks*; and the rather, because they are of an excellent good Taste: As to your Choice, you need not be otherwise curious, than in taking such as are whole, the largest and fairest you can get.

[These are the Seeds of the *Gingidium Foeniculi folio*, C. B. Pin. 191. *Gingidium verum Syriacum*, Park. 890.

Thapsia orientalis, anethi folio, semine eliganter crenato, Tourn. Cor. 22. Boer. Ind. 60. This is the true oriental Kind. There are also the Seeds of another Plant put to the same Use, call'd the *Spanish Tooth-Pick*, which is the *Gingidium umbella longa*, C. B. Pin. 151. *Visnaga Gingidium appellatum*, Park. 890. *Visnaga*, Boer. Ind. Æ. 49. The Plants have both the same Virtues with Fennel, but are never used, except in the Tassels, which make excellent *Tooth-Picks*.]

12. Of Hearts-Ease.

BESIDES the *Bisnague*, we sell a certain Flower, which is brought us *Pomet*. from *Provence* and *Languedoc*, or from *Lyons*; because of its bluish Colour, and its Resemblance to Violets, when dry'd; upon which Account the Apothecaries use it instead of *March Violets* in several of their Compositions, where the true Violets are required, which is an Abuse, as it has been observ'd by Mr. *Charas*, in his *Pharmacopœia*, the second Edition, Page 334.

But these are not true Violet Flowers, but the Flowers of a Plant, whose Figure is here given under this Head, and which is what the Botanists call *Viola Tricolor crecta*, *Assurgens Tricolor Dodonæi*, &c. and others *Viola Pentagonia*; in *English*, Pansy or Fancy; *Flos Trinitatis*, by some, *Trinity-Flower*, and by others *Hearts-Ease*: It is call'd the Flower of Trinity from having three Colours; to wit, the Violet, the blue, and the yellow; some have thought these Flowers, tho' erroneously, a proper *Succedaneum* for true Violets; which being so well known in all Countries, and treated of in every Herbal and Dispensatory, I shall say nothing further of, either in relation to the Syrup, Flower, Seed or Comfit; but advise every Body to apply themselves to honest People when they want any of them, that they may furnish them with what is true, natural, and not decay'd.

There are other Sorts of Flowers sold by us, as red Peppy, Colt's-Foot, St. John's Wort, Centaury, Cat's-Foot, and Lilly of the Valley, and several others People are furnish'd with from the Herb-Shops, and publick Markets in Paris, as I told you before ; for which Reason there are a great Variety of Simples that we do not keep in our Shops.

Herba Trinitatis, Viola Tricolor, Lemery. *Jacea major, five Viola Tricolor, five Trinitatis flos, Pansy, or Pensie* in French, and *Fancy* in English, is a Kind of Violet, or Plant, bearing its Leaves upon creeping Stalks, like those of Ground-Ivy ; the Flowers are blue, purplish, or white and yellow, without any Smell, each compos'd of five Leaves. After the Flower is gone, there appears a Pod, or Bag, which contains several small Seeds ; the Root is fibrous and stringy. This Plant is cultivated in our Gardens, flowers most of the Summer, and yields some essential Salt and Oil : It is incisive,

vulnerary, deterfive, penetrating and sudorifick ; good for Ulcers of the Lungs, Coughs, Obstructions of the Womb and Gall : The Juice taken in White Wine, &c. is good *against Fevers* and Inflammations, drank for a Continuance of three Weeks or a Month ; it is said to be a Specifick in the Venereal Disease : The saline Tincture is much more effectual for that and other Purposes above-mentioned : Dose three Drams in any proper Vehicle.

[These are the Flowers of the *Viola Tricolor*, Ger. 703. *Viola Tricolor major et vulgaris*, Park. 756. They are never used in Medicine, the other Violet we make the Syrup from, possessing all their Virtues in a much greater Degree, which is the *Viola martia purpurea flore simplici odorato*, C. B. Pin. 199. *Viola simplex martia*, Park. Parad. 282. The Syrup of this is the hardest to keep, but is also happily the hardest to counterfeit of any in Shops.]

The End of the Book of FLOWERS.

BOOK the Seventh.

Of FRUITS.

P R E F A C E.

IN this Chapter I shall take in whatever bears the Name of Fruit, and whatever, in Herbs, Plants, Shrubs, or Trees, it is that succeeds the Flower ; and likewise, whatever is produced by any of them, whether naturally, or as an Excrescence, as Mistletoe by the Oak, Agarick by the Larch Tree, and the like : I shall also speak here of what we have from Fruits. Fruits are commonly distinguish'd into two Sorts, to wit, into such as bear Nuts, and such as bear Stones or Kernels. It is said that Fruits are compos'd of three essential Parts, namely, the Skin, or outward Membrane, the Pulp or fleshy Part, and the Fibres or stringy Parts. There are Fruits whose Kernels are cover'd with a Capsula, or Case, that contains the Seed, and others that are not.

1. Of White Pepper.

Pomet. **W**HITE Pepper is the Fruit of a climbing Plant, whose Leaves are entirely like those of our Gooseberry ; after which come small Clusters, adorn'd

with round Seeds, green at first, but when ripe they are of a greyish Colour.

As this Pepper-Plant cannot support itself, the Inhabitants of those Parts where it grows, plant it at the Root of certain Trees, as the *Arcea*, which is a Sort of Palm-Tree, very straight and tall ; the Cocoa, or other Trees of the like Nature

Book 7.
of Fruits

1



White Pepper climbing up y^e Areca.

2



Black Pepper climbing up y^e Aviaay.



Black Pepper leaf.

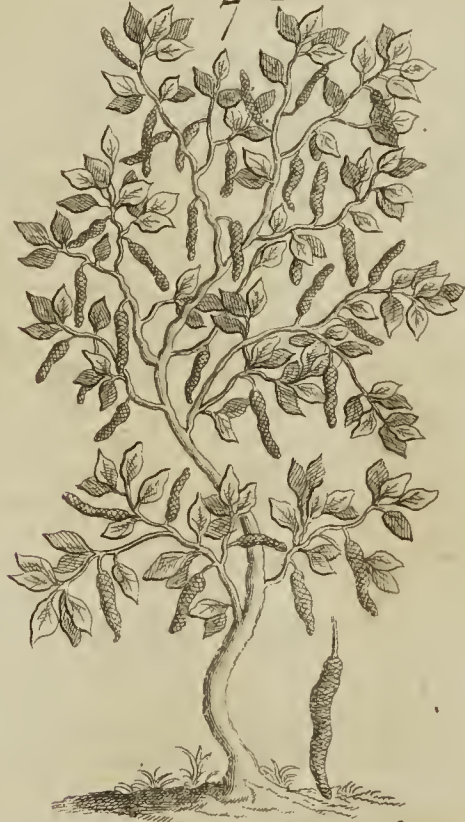
6



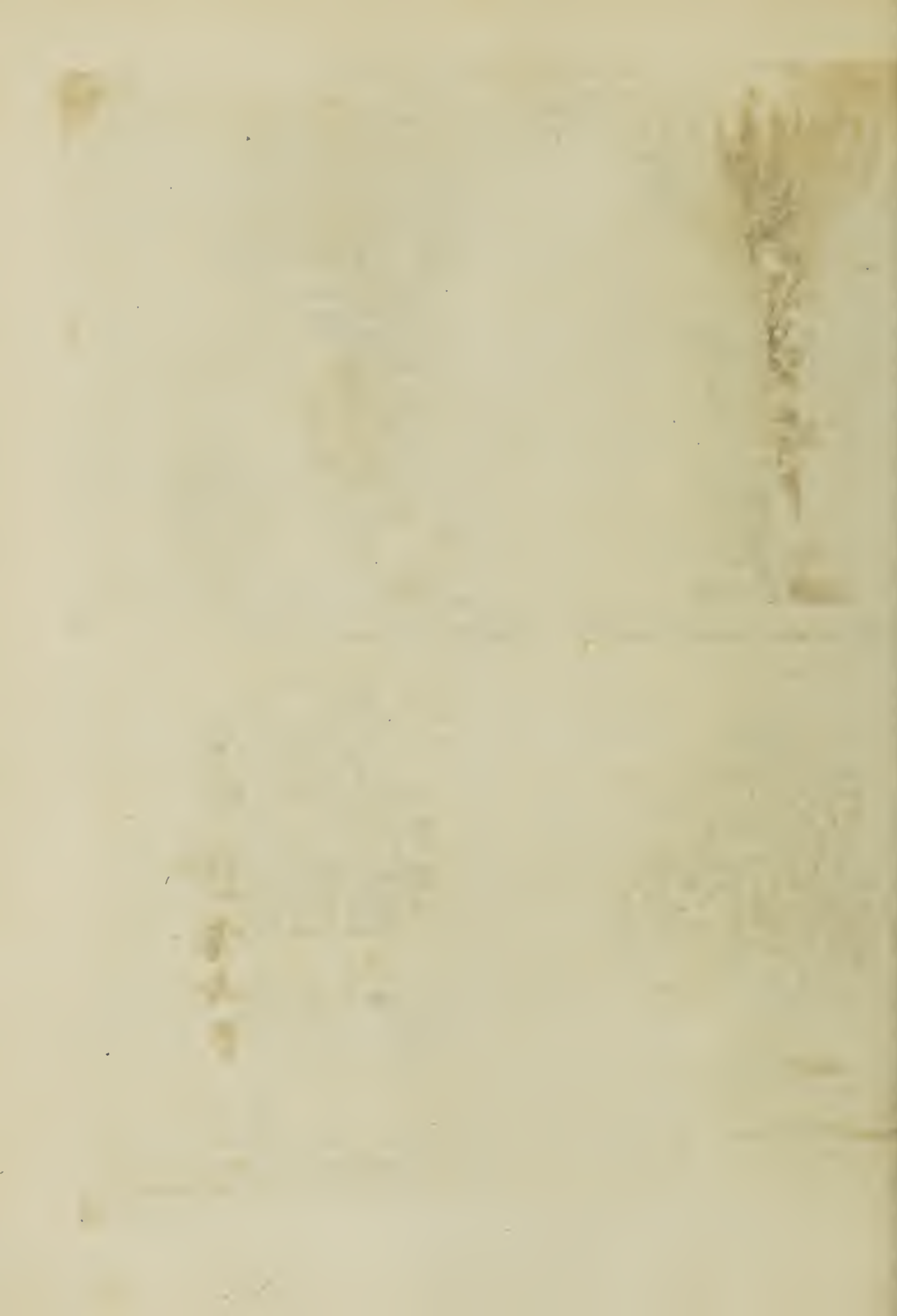
Long Indian Pepper.

Mecaxuchit.

7



Long Indian Pepper of America.



ture. But as this Pepper is rarely brought to us, a great many Persons will affirm, that there is no such Thing as true natural *White Pepper*, and that what we have is only the Black with its outward Rind taken off. It is for this Reason I have given you the Figure, and will endeavour to prove the *White Pepper* to be natural in some Places, according to what M. de Flacourt, Governor in the Isle of *Madagascar*, asserts; who says, that the true *White Pepper* grows upon a Creeper, and that the Stalk and Leaves smell altogether as Pepper; and that there are great Quantities in that Country, where the *French* might have a good Establishment, and lade their Ships, every Year, with a great deal of it; for the Woods all about are full of it, so that it is Food for the Turtles and Wild Pigeons. It is ripe in *August*, *September*, and *October*. Tho' some Authors, and among the rest *Piso*, in his History of the *Indies*, and after him Mr. *Charas*, observes, that there's no such Thing as *White Pepper*, it shall not hinder my Belief of it; for it is impossible that they can ever bark Black Pepper, so as to make it smooth and even, as we find the white *Coriander Pepper* that the *Dutch* bring us. And further, when we break the Pepper, we see the outward Skin, which is an infallible Token that was never taken off; and if it had been bark'd, we should have discover'd some Grains with the Wrinkles remaining; and this is such a Truth, that all the Peppers we find bark'd, or husk'd, and blanch'd in *Holland*, we always find a great Part of them plainly to have a wrinkled or wither'd Skin.

Chuse the true *White Dutch Pepper*, the largest, best fed, heaviest, and the least Black amongst it, that you can get; and take Care of such as is blanch'd, which is soon known by rubbing it in your Hands; for the white mealy Colour will change yellow: Besides that, the *Coriander Pepper*, that is not blanch'd, will appear with little Streaks like Ribs; and when beat to Powder, of a fine grey, tending to a white Colour: Its Uses are too well known to detain me any longer on that Head. We pound, or reduce to a gross Powder, the white *Coriander Pepper*, upon which we throw Essence of *Ambergrease*, and then it is call'd *Amber-Pepper*, or *Bergerac Pepper*, which has no other Use than to gratify Persons of Quality.

2. Of Black Pepper.

BLACK Pepper is likewise the Fruit of a Creeper that has large broad Leaves, very fibrous, and supplied with seven nervous Ribs, that are very conspicuous, according to the Figure

which was given me by M. *Tournesfort*. The *Dutch* and *English* bring three Sorts of *Black Pepper*, which differ not from the other, but according to the Places where they grow. The first and finest is that of *Malabar*; after that the Pepper of *Jamby*, which comes the nearest to the *Malabar*. The third Sort is a meagre, lean, dry Pepper of *Bilipatham*; and tho' that be the least of all, it is nevertheless most esteem'd by the *Mahometans*, because, they say, the smaller the Pepper is, the better Condition it is of: The smaller Pepper is not so hot as the great Pepper, which is the Reason the *Dutch* rarely bring any of the little Pepper from *India*: Besides, they have a better Trade for the large *Malabar Pepper* than other Nations, in that they never pay any Ready Money, but truck with the Natives for their Commodities which they carry thither, as *Quick-Silver*, *Cinnabar*, and the like; whereas the *English* buy theirs with Ready Money; for which Reason they cannot well afford one Bale of *Malabar Pepper*, to a Lot of *Black Pepper* of ten Bales, which makes the Pepper from *England* seldom so fine and large as the *Dutch*.

Chuse your *Black Pepper* well fed, and little wither'd or wrinkled, heavy, and as clean from Dirt and Dust as can be; and take Care of being imposed upon with Pepper, the largest of which has been pick'd out for making *White Pepper*.

The *Black Pepper* is used as the *White*, and is likewise of Use in Medicine, because of its Warmth; for which Reason it is employ'd in some hot Compositions, as *Venice Treacle*, and some others. Druggists sometimes sell it; but it is mostly sold by the Grocers. Pepper expels Wind, and cures the Cholick, so that it is the Basis or Foundation of most of the *Gripe-Waters* that are made: The Tincture is good for most cold Diseases of the Nerves and Brain; as Palsies, Convulsions, Rheumatisms, Sciaticas, &c. The Chymical Oil, whereof this yields but little, is an incomparable Remedy, internally or externally, in Weakness of the Parts of Generation of Men or Women, as likewise in Barrenness; a few Drops of the Oil in any proper Lintment, rubb'd upon the *Perinæum* three or four Times, will restore a lost Erection.

3. Of Fine Spice.

THE *Fine Spice* is a Mixture of several Aromatics together. To prevent the Abuse that attends this Composition, I have thought fit to give the Receipt of those Things it ought to contain: Take *Black Dutch Pepper*, five Pounds; dry'd Cloves, one Pound and a Half; Nutmegs the same Quantity; fresh dry'd Ginger, two Pounds

and a Half; green Anise and Coriander, of each three Quarters of a Pound; powder them separately, and sift them thro' a fine Sieve; then mix them together, and take Care to keep them close stop'd for Use.

It is here observable, That the Generality of those who make the four Spices, use, instead of Pepper, Pepper-Dust; instead of Cloves, *Jamaica* Pepper; instead of Nutmegs, white Costus, or a Kind of Bark, that I know not well what to call, but is so like rough Cinnamon, that it is impossible to discover the Difference, but that the Taste is altogether foreign, and has more Likeness to Sassafras, the lesser Galingal and Cloves mix'd together; and those who sell it, call it Cinnamon-Wood, clov'd Cinnamon, or Clove-Wood, and say, that it is the Bark of the Clove Tree, which is false; for my own particular, I believe that it is the Bark of a Kind of *Sassafras*.

4. Of Cubebs.

CUBEBS are a little Seed, or Berry, so like the Black Pepper, that if it was not for their little Stalk or Tail, and that they are a little greyish, no Body could find out the Difference betwixt them and Pepper: These grow likewise on a creeping Plant, the Leaves of which are long and narrow; after which comes the Fruit in Clusters, each being ty'd by the Means of a little Stalk. The Isle of *Java*, *Bantam*, and other Parts of the Eastern World, produce great Quantities of *Cubebs*; they are of some Use in Physick, from their pleasant Taste, especially when held in the Mouth without chewing; likewise of admirable Use to make the Breath sweet and help Digestion. They are said to be good for Barren Women, by taking away the Coldness, Moisture and Slipperiness of the Womb.

The best are such as are large, heavy and fresh. Not many Years ago it was disputed what they were; some said they were a Sort of Pepper like the Black; others thought they came from the *Agnus Castus*; and some again said they were the Fruit of a *Ruscus*, or that of *Amomum*; which were all false Conjectures; for they are the Fruit of a creeping Plant, as I have before describ'd, and delineated in the Figure.

5. Of Thevet Pepper.

THE Thevet Pepper is a small round Berry, of the Size of White Pepper, reddish as to Colour, and at one End has, as it were, a little Crown; but as this Pepper is of no Kind of Use, by Reason of its Scarcity, I shall say nothing fur-

ther of it, but only that it has a pleasant aromatick Taste. The Tree that bears it, is of the same Figure, as express'd in the Plate under the Name.

The *Dutch* likewise give the Name of *Amomum* to this Pepper, as well because of its Resemblance to *Jamaica* Pepper in Shape, as because it has almost the same Taste; and because it is both round and bears the Taste of Clove, it has obtain'd the Name of the little round Clove, to distinguish it from the Clove, or *Madagascar* Nut. They use it in the Place of the common Clove, as the other.

6. Of Long Pepper.

LONG Pepper is the Fruit of a Plant altogether like that which bears the Black Pepper, except that it climbs not so high, but grows commonly in the Nature of a Shrub, and supports itself upon its own Stem, and has smaller and much greener Leaves, the Stalks of which are not so long as those of *East-Indian Long Pepper*.

The *East-India Long Pepper*, which is that we usually sell, is a Fruit of the Thickness and Length of a Child's Finger; it is, properly speaking, nothing else but a Collection of Seeds together, something red without and blackish within. In each of these Seeds is a Kind of Kernel, or a Sort of white Powder, of a hot biting Taste; they stick so close together, as not to be separated but by pounding; and this Mass forms a Kind of Fruit of the Size and Length aforesaid.

The *Dutch* and *English* bring Plenty of this Pepper from *India*; which, to have its requisite Qualities, ought to be fresh, well sed, weighty, hard to break, sound, and as clear as can be from Dust and Dirt, which it is very subject to be full of. It is of some Use in Physick, as it is an Ingredient in the great Treacle, and some other *Galenical* Compositions; and is recommended, when bruised into a gross Powder, to boil in any Food, and given to Nurses to increase and give a fresh Spring to their Milk. It warms a cold Stomach, raises the Appetite, consumes crude and moist Humours, expels Wind, provokes Urine, and cures the biting of Serpents, and other venomous Creatures.

7. Of Long American Pepper.

THERE is found in the Islands of *America* a Shrub, which has Leaves almost like those of Plantain, which produces a Fruit about a Foot long, according to the Relation of *Nicholas Menard*. This Fruit is composed of several little Seeds, placed about a long Stalk, ranged in Order and touching one another, and are together of the



Cubeba climbing up on y^e Thevet Pepper Tree.



Ethiopian Pepper.



3. Sorts



The Jamaica Pepper or all Spice Tree.

the same Shape as the Long Pepper. The same Author says, that the Fruit, when fresh and young, is green; but when the Sun has ripen'd it, black; and that it has more Acrimony than the Long East-India Pepper.

This Long American Pepper is what the Americans call *Mecaxuchit*, which serves them to put into Chocolate. 'Tis likely the Author of the Book of Tea, Coffee, and Chocolate, never heard of this Fruit, for he has taken no Notice of it.

This Long Pepper, in Appearance, is that which the Reverend Father Plumier means by the Name of *Saururus*, *Botryitis major*, *Arborescens foliis Plantagineis*; which signifies, the great Shrub Lizard's Tail, with Plantane Leaves. The Reverend Father observes, that this Long Pepper is a Fruit, or rather a Cluster, of half a Foot long, and four or five Lines thick at the Bottom, but grows narrower at the End; and is full of a great many Grains, or Seeds, of the Size almost of Mustard-Seed, which are green at first, and black and soft when ripe, of a hot biting Taste. The same Father says, That this Pepper is much used by the Islanders, as likewise the Root of the Plant, for curing a Disease they call the Stomach-Ach. He further observes, That there are several Kinds of this Plant met with in the Islands, which vary not, save only as to the Size of the Leaves; but as his Account would be too tedious to insert in this Place, I shall refer the Reader to his Book, where it is treated of at large.

8. Of Long Black Pepper.

BESIDES the other two Sorts of Long Black Pepper, of which I have been speaking, we sell sometimes, tho' very rarely, a third Sort, by the Name of Long Black Pepper, or Ethiopian Pepper, Moorish, or Zelim Berry. This Pepper is the Fruit of a creeping Stalk, which produces neither Leaves nor Flowers, but only five or six Heads of the Bigness of one's Thumb End, hard and roundish, from whence proceed several Pods of the Length of one's Little Finger, and the Thickness of a Quill, brown without and yellow within. These Pods are divided by Knots, and in each Knot is found a little Bean, black without, and reddish within, without any Taste or Smell, which is unlike the Pod, for that is of a hot, acrid, biting Taste, and pretty aromatick, especially when held long in the Mouth; and by reason of its great Acrimony, the Ethiopians make use of it for the Tooth-Ach, as we do Pellitory of Spain. But as this Pepper is little known, and very scarce, I shall trouble you no farther with an Account of it.

9. Of Guinea Pepper.

GUINEA Pepper, or Garden Coral, which the Americans call Mexico Pepper, Tobago, Brasil, Spanish, Long Red Indian Pepper, Chilli Axi, or Carive, and we French Pepper, or American Pepper; is a red Pepper, whereof there are three Sorts, viz. The first, that we sell, which comes in Pods of the Thickness and Length of one's Thumb. The second is much smaller, and as it were emboss'd. The third is much less, and almost entirely round. All the three Sorts of this Pepper, as they hang to the Plant, are green in beginning, yellow when half ripe, and red at last. Of the three Sorts we sell only the first, in that the others are too acrid, so that none but the Natives can use them; they, indeed, are very fond of them.

The Guinea Pepper which we sell, comes from Languedoc, especially the Villages about Nismes, where they cultivate it very much: And this Plant is at present so very common, that we have few Gardens without it. The Use of it is chiefly for the Vinegar Makers, to make their Vinegar; for which Purpose it ought be fresh, in fine Pods, well dry'd, and of a good red Colour. Some People make Comfits of this Pepper to carry to Sea, and the People of Siam eat this Pepper raw, as we do Radishes: But it is much more grateful to the Palate and Stomach, and must undoubtedly please better in Sauces, being preserv'd in a Pickle thus: Take strong Brine that will bear up an Egg, and Wine Vinegar, of each a Quart; good Spirit of Wine, a Pint; put the Pepper Pods into it, as well unripe and green, as those that are ripe, and of a red Colour.

[Black Pepper is the Fruit of the *Lada*, aliis *Molanga*, sive *Piper aromaticum*, Pif. Mant. a. 492. *Piper rotundum ex Malabara foliis latis, quinque nervis albicantibus*, Herm. Musc. Zeylan. 32.

The White Pepper is the *Piper album Leucopiper*, Mont. Exot. 9.

The East-Indian Long Pepper is the Fruit of the *Hatlancuaye* sive *Piperis longi species*, 2 Hern. 126. *Cattatripali*, Hort. Mal. 7. 27. Tab. 14. This is always gather'd before it is quite ripe, and is brought to us from Java and Malabar.

The American Long Pepper is the Fruit of the *Saururus humilis folio carnosio sub rotundo*, Plum. 53. Fig. 70. *Piper longum humilius fructu e summitate caulis propendente*, Cat. Jam. 45. This grows principally in New Spain; it is in some Places made an Ingredient in Chocolate, but we seldom see it here.

The

The *Guinea Pepper* is the Fruit of the *Capsicum longioribus siliquis*, Ger. 292. *Solanum Capsicum dictum vulgatissimum*, Hort. Lugd. Bat. 354. There are many Species of this Plant, but the Pods we see preserv'd in Pickles are the Fruit of this Kind.

The *Æthiopian Pepper* is the *Piper Æthiopicum siliquesum*, J. B. 187. *Carpesium Cord. Piper oblongum nigrum*, C. B. Pin.

The Tree which produces the *Cubebæ* is the *Arbor Bisnagarica myrti amplioribus foliis per siccitatem nigris Cubebæ sapore*, Pluk. Alm. 33. *Arbor Baccifera Brasiliensis fructu Piper recipiente*, R. Hist. 2. 1593. We have these from *Java*, where the Inhabitants boil, or at least scald them in hot Water, before they export them, to prevent their being rais'd any where else.

The *Thevet Pepper* is the Fruit of the *Xocoxochitl seu Piper Tavaſci*, Hern. 30. but it is never seen among us.]

10. Of Cloves.

THE *Clove* is, properly speaking, the Flower of certain Trees, that is made hard and black by the Heat of the Sun: They were always very common in the *Molucca* Islands 'till of late Years, the *Dutch* not being able to hinder the *English*, *Portuguese*, and *French* from going thither, and bringing away *Cloves* from thence, thought it advisable to make themselves entirely Masters of that Commodity, to pluck up all the Trees, and transport them to an Island of their own, call'd *Ternate*; by which Means other Nations are forc'd to purchase that valuable Merchandise from them.

As to the Leaf of the Tree bearing the *Clove*, the Figure here represented in the Plate, was taken from the Original in the Hands of M. *Tournefort*. Here is also the Root, the Stalk, and the Leaves, in the Figure mark'd *A*, which came from two *Cloves* which were planted, and which in a little Time produced that little Root, Stalk, and Leaf, as represented.

When the *Clove* begins to appear, it is of a whitish green, afterwards reddish, and according as it ripens, it grows brown; and that without being steep'd in Sea-Water, and dry'd before the Fire, as some Authors have observ'd: For the *Dutch*, and Natives of the Islands, make no other Preparation of the *Cloves* than after they are beaten from the Tree to let them dry in the Sun, expos'd in the open Field, and after that keep them carefully. As it is impossible but there must remain some *Cloves* upon the Trees after the Crop is got, these grow to the Size of a Man's Thumb, and contain a black Gum, of a pleasant Smell

and fine aromatick Taste. I never had any so large, but only of the Bigness of one's Little Finger's End. We now and then meet with some of these among the *Cloves*, but very seldom; because the *Dutch* sell them separately, by the Name of the *Mother-Clove*; and these large ones are known in Physick by the Name of *Antophylli*; but the little Use of them is not a sufficient Encouragement to the Apothecaries to enquire after them, otherwise they are proper for Use, as abounding with a Gum, that is vastly more fragrant and aromatick, and endow'd with much greater Virtues than the common *Clove*.

It is observable, that near to where the *Clove-Trees* grow, no other Tree or Plant will thrive; because the great Heat of these Trees consumes all the radical Moisture of the Earth round about them. It is observable likewise, that there are no Trees or Plants in the whole World that afford so sweet a Smell as the *Cloves* when they first appear.

Chuse such *Cloves* as are well fed, or oily, dry, brittle, or easy to break; of a tawny red, well furnish'd with the Top, or Head, to which some improperly give the Name of *Antophyllus*: I mean, that little Head at the Top of the *Clove*, which is very tender, and of a clear tawny Colour; and which, being put into the Mouth, has a hot, piquant, aromatick Taste. Reject such as are lean, blackish, soft, and without Taste or Smell; taking Care that such as are good are not mix'd with such as have had an Oil or Tincture extracted from them, which renders them of a flat, bitter, earthy Taste. The Use of this Drug is too well known to need any Account of its Virtues, which are so considerable, as to give it a Rank among the best Cordials.

The *Dutch* candy *Cloves* when they are green, and they make an excellent Confect, which is of great Use to carry to Sea, to correct and expel Wind, prevent Crudities of the Stomach, Fainting, Swooning, &c. as also to restore Nature where decay'd, and recover a weak and languid Constitution, giving Heat and Vigour to the Body, and Motion to the Limbs.

The *Dutch* distil a great deal of essential Oil from the *Cloves*, and too often impose them on Strangers afterwards for a true Commodity. This Oil is used by the Perfumers, Surgeons and Apothecaries, in several Compositions, and as a Corrective for many Sorts of Purges, as *Pilulæ ex ductus*, &c. There is a white Oil of *Cloves* made by Means of Fire, a Drinking-Glass, and the Bottom of a Scale, as observ'd by Mr. *Lemery*, but it is scarce worth the Time of doing it, and it is not better than the other Sort.



Royal Clove.



Clove.



Nutmeg.

A Nutmeg from
whence arises a
Stalk & 2 leaves.



AAAA. Nutmegs
Cover'd wth Mace.

Female Nutmeg

II. Of the Royal Clove.

THERE is another *Clove* express'd in the Figure, which we meet with now and then in *Holland*, tho' it is but seldom; which is a small Fruit of the Shape and Bigness of a Barley-Corn, and which terminates in a Point, sticking five or six together upon one small Branch; so that they resemble, in some Measure, a little Crown.

This *Clove* is of an Iron Colour, and has the same Taste and Smell as the common *Clove*. They say there is but one Tree that bears this Fruit in all the Country, and that grows in the Middle of the Isle of *Massia*, in the *East-Indies*, where it is call'd, by the Inhabitants of the Island, *Thinca Radoi*, which signifies *Royal Clove*. This Fruit, by the Order of the King of the Island, is guarded by Soldiers, that no Person may have it but himself. They pretend likewise, that when this Tree is loaden with Fruit, the other Trees bend down towards it, to pay their Homage; and the Flowers of the common *Clove* fall off when these begin to appear. They string this Fruit, and make Beads of it, to carry about them, because of its agreeable Smell.

I shall say no more of this *Clove*, having nothing certain that I can collect, and having never seen it, notwithstanding all the diligent Enquiry I have made: But the Thing has been certified to me by a Person who saw it in *Holland*, and *Piso* speaks of it in his Natural History, from whence the Figure is taken; and Mr. *Wormes* quotes it in express Words, in the 203d Page of his Book; the Sense of these Authors I have already given you in *English*, but for the more Curious I shall deliver it in the Original from *Piso*.

Garyophyllus Regius fructus est à nemine quod sciam hæcenus descriptus, florem potius quam fructum figurâ referens, longitudine est grani hordei, ejusdemq; ferme latitudinis, oblongus, angulosus, sex vel octo cuspidinibus alternatim è lateribus erumpentibus, & in summitate quasi coronulam constituentibus; colore ferrugineo, odore Garyophyllorum aromaticorum, sapore acri & planè Garyophyllaceo. Prevenit in insula Macciam Indiæ Orientalis; ab incolis vocatur Thinca Radoi, quod exponunt Garyophyllus regius.

Magno in pretio apud Indos sunt hi Garyophylli, & ad nos raro deferuntur. Unicam saltem ferunt esse bujus fructûs arborem in tota India in medio dictæ insulæ sitam. Flores ubi producit hæc arbor decidunt flores reliquarum arborum, quæ communes ferunt Garyophyllos. Arborea etiam reliquæ versus hanc se incurvant, honorem quasi deferentes, ut aiunt qui viderunt. Rex insulæ Satellitibus hanc arborem stipat, quamdiu fructum fert, ne quis præ-

ter ipsum eo gaudere possit. Hæc ex ore ejus qui in insula fuit & arborem se vidisse testatur; quæ, si vera, mira. Fructus filo per longitudinem trajicere solent, ut Armillarum loco, ob odoris gratiam, in brachiis gestentur.

Caryophylli, sive Garyophylli, in English, Cloves: They are call'd a Fruit, *Lemery*. but are rather an aromack Flower from an *Indian Tree*, whose Leaves are long, broad, and pointed. When the Fruit begins to appear, their Colour is of a whitish green; afterwards they grow red, and at last, when ripe, are of a dark brown, as we see them of. The large *Cloves* are call'd, in *Latin*, *Antophylli*, or the *Mother-Cloves*, but they are very scarce. There is also the *Caryophyllus Regius*, or the *Royal Clove* [describ'd by *Pomet* from *Piso*.] It has this Name from bearing on its Top a Sort of Crown; for which Reason the King of the Country keeps it in his own Possession; and because there is a common fabulous Opinion, that the other Trees bow towards this as their King.

The *Cloves*, in general, are cephalick, neurotick and cardiack, proper for the Epilepsy, Palsy, and Vertigo; are good in Wind and Cholick, and are allow'd, especially the Oil, to be the best Specifick in the Tooth-Ach. They are used in Powder, Tincture, Water, Spirit, Oil, &c. The Way to make an Oil by Distillation, is to make a Kind of Putrefaction first, in order to dissolve all the Parts of the *Cloves*, and to force the volatile Salt and oily Parts more effectually from the earthy Parts, thus: Take *Cloves* grossly bruised, one Pound; put to them Fountain or Rain Water, lukewarm, two Quarts; cover it with a Vessel close, so as to lute it well; put it into a gentle Heat in Sand for fourteen Days; then put all the Matter into a Copper *Vesica*, tinn'd within, which cover with its Head and Refrigeratory; add a fit Receiver, lute the Juncures, and distil with an immediate quick Coal Fire, shifting as Occasion requires; continue 'till you have distill'd about two Thirds of the Humidity: This done, and the Vessels being half cold, separate the spirituous Water which swims above the Oil, putting up that into a Glass Vial, which keep close stopp'd for Use: Cohobate the distill'd Water upon the *Fæces*, and distil again as before, so will you have more Oil, which the first Distillation could not raise, which add to the former Oil, keeping the distill'd Water also for other Uses.

Or, Take Powder of *Cloves*, one Pound; warm Water, two Quarts; macerate them for a Fortnight; then put all into a Glass Retort, and distil in a Sand-Heat, with a moderate Fire, so will Oil and Water come over; which separate as before, and cohobate the Water, as in the former

former Operation ; so will you have all that the Clove contains of Oil and volatile Salt, which is cephalick and cordial, besides its other Virtues. It is given from one Drop to three, incorporated with double refin'd Sugar, and mix'd with some proper Vehicle, either liquid or solid ; as in Bolus's, Opiates, Pills, Tablets, or the like, as you see Occasion. It may be also mix'd with Oil of Nutmegs by Expression, to anoint the Temples for the Head-Ach, and the Stomach, to strengthen that Part, and procure Digestion. A pretty cephalick Balsam is made with Oil of Nutmegs, one Ounce ; Oil of Cloves, one Dram ; Musk and Ambergrease, each six Grains ; Oil of Cinnamon, ten Drops ; Oil of Mace, two Scruples ; mix, and make a Balsam for internal and external Cafes.

[The common Clove is the unripe Fruit of the *Caryophyllus aromaticus fructu oblongo*. Breyn. Prod. 2. 25. *Caryophyllus aromaticus Indiæ orientalis, fructu clavato monopyreno*. Pluk. Alm. 88. The ripe Fruit, the *Antophilli* of the Shops, are seldom seen. It is a Secret among some, who deal largely in Cloves, to keep them in a Cellar or other damp Place, where they will swell and encrease considerably in Weight, and look much better, tho' they really are much worse, than before such Management. The other Trees bending to the Royal Clove, is a Tale too absurd to bear any Animadversions.]

12. Of the Nutmeg.

Pomet. **T**HE Nutmeg, or *aromatick Nut*, which the *Latins* call *Nux Moschata*, *Myristica* or *Aromatica*, is properly speaking the Kernel of a Fruit, of the Size of a green Walnut : We distinguish the *Nutmegs* into two Sorts ; to wit, into the Male or long *Nutmeg*, and the Female, or round, common *Nutmeg*.

The Tree that bears the *Nutmeg* is of the Bigness of the Peach-Tree, and the Leaves have a very near Resemblance to those of the same Tree, according to *Dalechamp*, except that they are shorter and narrower ; after which comes the Fruit of the Size of a Walnut or Abricot. This Tree, according to Mr. *Tavernier*, is not plant'd, but grows by Means of certain Birds, or Fowls, which swallow the *Nutmegs* whole, and throw them out again without having digested them ; and the *Nutmeg* being then cover'd with a viscous and gluey Matter, and being cast upon the Ground, takes Root, and produces a Tree, which it would not have done, if set in the Manner of others.

The *Nutmeg* is likewise a Commodity which none but the *Dutch* are Masters of, because it grows no where but in the Isles of *Nero*, *Lon-*

tour, *Poulcay*, *Rosgain*, *Poleron*, *Granapuis*, and *Dame Island* in the great Island of *Banda* in *Asia*, and not in the *West-Indies*, as a late Author says. It is remarkable, that so little a Quantity of Land should furnish all the World with *Nutmegs* ; but it is not hard to be believ'd, when one considers, that these Isles are so stock'd with *Nutmeg-Trees*, that it is almost incredible ; and besides, they lie in so good a Climate, that the Trees are always loaden with Flowers and Fruit, and they have three Crops a Year ; to wit, in *April*, *August*, and *December* ; but that of *April* is much more valued than those which are got in *August* or *December* ; and the Climate is so temperate, that the Men live to a hundred and twenty Years of Age, and have nothing to do but eat, drink and sleep, and walk about, while the Women employ themselves in separating the outer Fruit from the *Nutmeg*, drying the Mace, and breaking the Shells wherein is the *Nutmeg* ; being the chief Commodity of the Country, and almost all they live by.

The *Nutmegs* we sell are nothing but the Kernels of the Fruit, which are cover'd with a hard, thin, and blackish Shell. Without this Shell there is found a covering, which is thin and reddish ; of a sweet Smell, and aromatick Taste, and is what we call Mace, but vulgarly, and improperly, the *Nutmeg-Flower*. After the Mace there is a green Pulpy Fruit, that is of no Use. From this it is to be observ'd, that the *Nutmeg* has three Wrappings, or Coverings ; to wit, the Shell, the Mace, and the Pulpy Fruit, and not barely two, as a late Author has observ'd ; and the Thing is so evident, that if any Person will give himself the Trouble to cut a preserv'd *Nutmeg* in two, he will find the three Parts, about which I have been speaking.

The Trees which bear the Female, or common *Nutmegs*, grow not but in cultivated, or improv'd Lands ; but those which produce the long *Nutmegs*, grow in Woods and Forests, which makes the *Dutch* call 'em wild *Nutmegs* ; but they are little us'd, because they are almost without Taste or Smell, and void of any Virtue, and for this Reason they are seldom brought hither : These Male *Nutmegs* were call'd by the Ancients *Azerbes*.

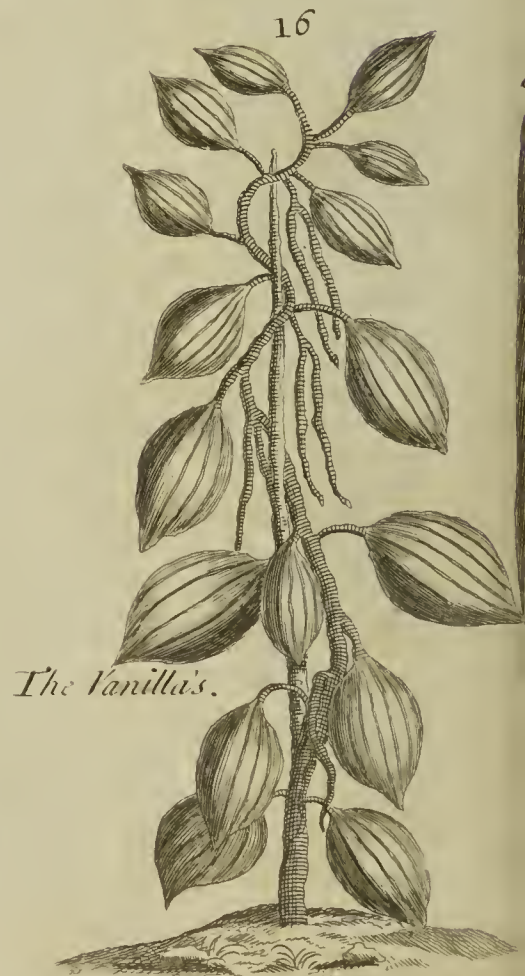
As to the common *Nutmegs*, we ought to chuse such as are heavy, firm, hard, and of a full Plumpness, of a light grey, whose Inside is finely marbled, and reddish, and such as are of a fat, oily Body, which are the Signs of their Newness, and which being grated afford a sweet Flavour, and put into the Mouth, yield a warm, piquant, aromatick Taste. As to the little Hole that is met with so very common in *Nutmegs*, 'tis a vulgar Error to believe, that that makes them lose



Coffee.



Cacao Nut.



The Vanilla's.

lose their Virtue; for there is no *Nutmeg* without it, as may be seen when the thin Rind is raised.

The Use of the *Nutmeg* is so well known, it would be needless to say any Thing of it; I shall only add, that it is valued in Medicine, and being beat up with Sugar, there is a Powder made of it, which is admirable, taken in warm White-Wine, for curing of Catarrhs and Rheums, that proceed from cold Causes; and this is call'd the Duke's Powder. The usual Quantity is to put two Ounces of *Nutmegs* to a Pound of Sugar, and some add Cinnamon. The Inhabitants of the Isle of *Banda* make a Confection of the green *Nutmegs*, which is brought to us by the Way of *Holland*, sometimes with Syrup, and sometimes without. These are one of the best Preservers we have, being very proper to strengthen and invigorate the Stomach, and to restore a natural Heat to Age; but their chief Use is to carry to Sea, particularly by the Inhabitants of the northern Parts, where they are much esteem'd; the People there being great Lovers of these Sorts of warm Sweet-meats.

As to the Oil of *Nutmegs*, by Expression, that which is brought us from *Holland* is no better than fresh Butter; for which Reason the Apothecaries ought to make it themselves, rather than buy it at such a cheap Rate, when it is good for nothing. The true Oil of *Nutmegs* ought to be of a thick Consistence, of a golden yellow, a sweet aromatick Smell, and a warm, piquant Taste. The Manner of making this Oil is so easy, and hath been so long known to every Artist, that it would be superfluous, at this Time of Day, to pretend to teach it; only this may be observ'd, that when it is expressed, it will be liquid and clear; but when cold it coagulates, and becomes yellowish, of a solid Consistency, and that it will yield a double Quantity of Oil this Way, from the same Weight, of any other Spice, Fruit, or Seed whatever. There is likewise another Oil made by Distillation, which is a white, clear Oil, very fragrant, and has double the Strength and Virtue of the Former; and whatever the *Nutmeg* has singly in itself, is hereby highly exalted; so that four or five Drops is a Dose in any proper Vehicle; wherein it becomes cephalick, neurotick, stomachick, cordial, hepatick, uterine and alexipharmick; good against all cold Diseases of the Head, Nerves, Womb, &c. expels Wind, and cures griping of the Guts. The Mace that grows round the *Nutmeg* has all the same Virtues; dissolves Wind, helps Concoction, cures stinking Breaths, strengthens the Child in the Womb, stops Fluxes and Vomiting: It is of thinner Parts than the *Nutmeg*, and there-

fore more piercing. The Oils, by Expression and Distillation, are made the same Way as those of *Nutmegs*. Chuse such as has the largest Blades, the highest and freshest Colour, and that is the cleanest you can get. As to the Bark of the Trunk, and the Branches of the *Nutmeg-Tree*, it is so little used, that it is not worth speaking of, and is seldom brought hither; by Reason of its great Likeness to the white *Costus*, both in Figure and Taste. Some sell *Costus* for the *Nutmeg* Bark, but that you ought to beware of.

Nux Moschata, *Moschocaryon*, *Nux Unguentaria*, or *Nutmeg*, is a Kind of *Lemery*. Nut, or Fruit, of a foreign Tree, as large as a Pear-Tree, with Leaves like the Peach, but much smaller. The Flower is in the Shape of a Rose, of a pleasant Smell; after the Flower is fallen off, a Fruit appears as large as a green Walnut, cover'd with two Barks; the first, which is very thick, is pull'd off when the Fruit is ripe; the second is much thinner and finer, reddish or yellowish; it is separated from the *Nutmeg* in order to dry, and is what we call Mace, not the *Nutmeg* Flower; this yields a great deal of Oil and volatile Salt.

When the *Nutmeg* is separated from the Barks, they dry and preserve it. The Tree which bears this grows plentifully in the Isle of *Banda*, where there are two Sorts, the wild and the cultivated, or male and female: The male, which is a long and large Nut, is seldom used: The female, which is the rounder and lesser Nut, is that generally sold in the Grocers Shops. When gather'd, some say they are laid in Quick-Lime, in the *Indies*, for two Reasons: *First*, that being carried into other parallel or proper Climes, they might not grow, for so in Time it might prove to their Damage. *2dly*, that being thus cur'd, the Worm, might not take them. The best are those of a reasonable Size, fresh, heavy, firm, not spongy, of an Oiliness when grated, and of a pleasant Smell and Taste, not too bitter or acrid. They fortify the Brain, Nerves and Stomach, assist Digestion, expel Wind, provoke the Terms, and resist Putrefaction.

Chuse your Mace fresh, whole, of a yellow Colour, a good Smell, and agreeable Taste, being a little acrid. It has the same Virtues with the *Nutmeg*, but more exalted, and it acts with greater Penetration and Efficacy. The Mace Bark or Wood of the Antients, is the Bark of the Trunk of a Tree of the same Name, which grows in *Barbary*, and is thick, reddish, and of a bitter, smart Taste. Its Virtue is astringent, and proper to stop the Bloody-Flux, and other Fluxes of the Belly; but this Bark is seldom

brought among us ; they impose it instead of Mace, tho' the Qualities are different, and so confound the Mace Bark with the true Mace.

[The Tree which produces the *Nutmeg* and Mace, is the *Nux Moschata fructu Rotundo*. Jonf. Dendr. 158. *Nux Moschata sive Myristica, Nucifsa*. Mont. Exot. .9.

What we call Oil of Mace by Expression, is the expressed Oil of *Nutmegs*, brought from the *East-Indies* in Jars, but this is of late become scarce, because we have from *Holland* a much cheaper, but much worse Kind of the same Oil.

There is indeed a true Oil of Mace by Expression, made in the *Indies*, but it is seldom or never brought into *Europe* ; it is express'd from the Mace while fresh, and is fluid, of a reddish Colour, a strong Smell of Mace, and is usually something thicker at the Bottom than at the Top of the Vessel it is kept in.

What is sold in the Shops of our common Retailers of Medicines who call themselves Chymists, under the Name of Oil of Mace by Expression, is a base Mixture of Sewet and Palm Oil scented with a little of the *Dutch Oil of Nutmeg* by Expression.]

13. Of Coffee.

Caffe, Coffe, Coffi, Buna, Bon, Ban, Pomet. *C* or *Elkaire*, is, according to a modern Author, the Fruit or Berry of a Plant, whose Stalk resembles that of our Bean ; but as he is a Person on whom we can have no Dependance, I shall hold with that celebrated Author, *Caspar Baubine*, who says, that Coffee is the Fruit of a Tree, whose Berries are brought from *Arabia Felix*, and that the Tree is like the Spindle-Tree, or *Euonymus*, and that the Leaves are thick, and always green, of the Shape represented in the Figure, which is taken from the said *Baubinus*.

Chuse your Coffee greenish, fresh or new, and that does not smell musty, but whose Berry is of a middle Size ; in short, the cleanest, driest and plumpest that can be had. As to those who buy whole Bales together, let 'em take Care that the Bottom of the Bales be not mouldy, which will spoil and damage the whole Cargo. *Coffee* is used for little or nothing that I know of, but to make a Liquor with Water and Sugar, which is more or less esteem'd, by different Nations ; where it is valued, there is a great Consumption made of it, in the prepar'd Berry ; which is done by drying it in an Oven or Kiln, so long, 'till it is well parch'd, or rather half calcin'd, and looks not of an absolute Black, but rather of a dark Purple, inclining to black ; if it be well burn'd,

and not over high, it has a grateful Flavour ; but if over much or too little done, or if afterwards it be ground any Time before it be used, it loses all its Virtue ; so that in making Coffee, the Powder is to be fresh ground, and used immediately ; for an Hour's Time will pall and flat it, so as it shall lose all its volatile Parts, which float like an Oil upon the Liquor, when fresh ; but upon the least keeping, after reduc'd to Powder, its essential Particles are so subtle as to fly away, or be destroy'd by the corrosive Nitre of the Air, which being expos'd to but for a few Minutes, they instantly imbibe.

Caffe, Coffe, or Coffee, is a small Berry, longish and round, like a Pine Apple Kernel, of a dark brown Colour ; its Bark is a Kind of Husk that is a little hard and woody ; it encloses a Berry as large as a Pea, of an oval Figure, dividing itself into two Parts, yellowish, inclining to white ; the Fruit grows upon a Tree of the same Name, which is common in the *Arabia Felix*, from whence it is transported through all the Dominions of the great *Turk*, and from *Turkey* brought to us, as is supposed, cur'd, that it may not be planted in other Countries.

It is of an excellent drying Quality, comforts the Brain, and dries up Crudities in the Stomach : Some Author says, it cures Consumptions, Rickets and Swooning Fits ; it helps Digestion, eases Pains of the Head, rarifies the Blood, suppresses Vapours, gives Life and Gaiety to the Spirits, hinders Sleepiness after Victuals, provokes Urine and the Courses, and contracts the Bowels ; it is an excellent Dryer, fit for moist Bodies, and most Constitutions, but that of young Girls, subject to the Green-Sickness ; and likewise is prevalent in such as are apt to have running Humours, Sores, or King's Evil upon them : It prevents Abortion, and confirms the Tone of the Parts drunk after eating ; but with this Observation, that this Liquor be always made fresh ; for if it stands but two or three Hours, it will be pall'd and grow naught. It is an effectual Remedy against Worms in Children ; so that if the Mother drink but frequently of it, when with Child, the Infant shall not be afflicted with Worms, during its Infancy.

[The Tree which produces *Coffee*, is the *Jasminum Arabicum Castanea folio flore albo odoratissimo cujus fructus Coffe, in officinis dicuntur*. Com. Pl. Uf. 85. *Bon Arbor cum fructu suo Buna*. Park. 1622. It is a Native of *Persia* and *Arabia Felix*, but is now become common in the Gardens of the Curious, and flowers and bears its Fruit with us ; it grows to about six Foot high, the Leaves are like the Bay Leaf, but longer, the Flowers

Flowers pentapetalous, and the Fruit like Bay Berries within; which is the *Coffee* we use.

The greatest Part of the *Coffee* we sell, is brought to us from *Mocha*.]

14. Of the Cacao, or Chocolate-Nut.

THE *Cacao* is the Fruit of a Tree *Pomet.* which grows in the *Indies*, of the Bigness of the Orange-Tree, but with Leaves longer, and more pointed; the Flower is large and yellow, which when fallen, leaves long, lanuginous, green Filaments, from which grow pointed yellow Fruits, which, as they ripen, become of the Size of a Melon; each of these Fruits contains twenty or thirty Kernels, as large as Pistachia Nuts, and sometimes there are as far as fourscore Kernels in one Fruit. Each of these is cover'd with a yellowish Pellicle, which being taken off, there appears a tender Substance, divided into several irregular Parcels, of an oily rich Taste, leaving something of a Sharpness behind them in the Mouth.

Wormius, in Page 191 of his Book, makes mention of four Sorts of Trees which bear the *Cacao Nut*; the first and second whereof are call'd *Cacabuaquahuatl*, the third *Xuchicacabuaquahuatl*, the fourth *Tlacacabuaquahuatl*; which Account agrees very well with the four Sorts of *Cacao* we sell, which certainly come from different Trees; the first and best Sort are call'd the large and small *Carack*, from the Province of *Nicaragua*, from whence these Sorts of *Cacao's* are brought: The third and fourth are call'd the large and small Island *Cacao's*, because they come from the *American* Isles, as *St. Domingo*, &c. The most valued of the four Kinds of *Cacao's* is the large *Carack*, especially for making *Chocolate*, which is their chief Use; for the small Quantities that are eat of them as they come over, are not worth speaking of; they ought all to be chosen fresh, plump, weighty, blackish without, and of a deep red within, well tasted and not of a musty Smell: The small *Carack* is as near approaching to the Qualities of the large as can be. As to the Island *Cacao*, especially the large, the nearer it comes to the *Carack*, the better it is. Some Authors say, that the *Cacao* is in such Use in *Mexico*, that it is the chief Drink of the Inhabitants of the Country, and that they give it as Alms, or Charity to the Poor: The other Sorts also that come from the Isles, are ground to make Bread of different Sizes, for the Use of different Sorts of People.

The *Cacaos*, or *Cacao*, is a Kind of *Lemery*. Almond that is made the Basis or Foundation of *Chocolate*, and from whence it takes its Name.

It grows in all the *Spanish West-Indies*, *Guatemala*, *Hispaniola*, *Cuba*, *New-Spain*, *Jamaica*, &c. in hot, but shadowy Places, being planted in Ranks and regular Walks, shady Plantane-Trees are rang'd with it; the one to shelter the other, lest the parching Sun, by its excessive Heat, should kill it, or the boisterous Wind injure it. This *Cacao*-Tree, not exceeding our Cherry-Tree for Bigness; as it is a Tree of singular Beauty, having large, broad, oblong, green Leaves, which fall back, and hang like so many Shields, to preserve and defend the tender Fruit; so it is a Tree of great Profit to the Owner, arising from its most desirable Fruit, which grows after an admirable Manner in Cods; studded, as it were, in the very Body of the Tree, as well as the Arms and Boughs, from the very Earth upwards; each Cod containing about thirty or forty Nuts, regularly set in a Mass of soft, slimy Pulp, to preserve, as well as nourish, the tender Fruit. The Nuts, among the *Indians* and *Spaniards*, go for current Money, even in those Countries where Gold and Silver are naturally produced; there is in them Food and Raiment, Riches and Delight all at once!

The Cod is said to be very like the Pear or Pear-fashion'd Gourd. Each Nut is about the Bigness of an Almond Stone, and cover'd with a thin Shell, blackish without, containing within a brownish red, or almost Chestnut-colour Kernel, with brownish Ash-colour'd Veins, which to the *Indians* is pleasant in Taste, tho' not altogether so to us. The Cods being gather'd, they break them, take out the Nuts, and lay them upon Mats to dry in the Sun, 'till the Moisture within them be consum'd, and then keep them both for Meat and Merchandize.

This Fruit is cooling, as may easily be discern'd by their cold nitrous Taste. They open Obstructions, restore in deep Consumptions, stimulate to Venery, causing Procreation and Conception, facilitate Delivery, preserve Health, help Digestion, make People inclinable to feed, ease Coughs of the Lungs, Gripings of the Bowels, and Fluxes thereof, cause a sweet Breath, and assist in a Difficulty of making Urine. The chief Use of them is in *Chocolate*, which is so well known, there needs no longer Discourse about it.

[The *Cacao* is the Fruit of the *Arbor Cacao*. *Pis. Mant. A. 197. Cacaoa Quavit sive Arbor Cacar Cacarifera. Hern. 79.* It is cultivated in *Cuba*, *Jamaica*, and other Parts of the *West-Indies*. It is a tall Tree, with a smooth even Bark, the Leaves are long, smooth, and pointed, and the Flowers pentapetalous, and of a very beautiful yellow.]

15. Of Chocolate.

Pomet. WE sell several Sorts of *Chocolate*, which have no other Difference but according to their Fineness and Goodness, the Drugs that compose them, and the Countries where they are made. But the best *Chocolate*, and the finest, is what is made with the largest *Carack Nut*, and wrought up with the finest Sugar, good Cinnamon, and the purest and best *Vanillas*: In short, what is made by an honest Man, who understands how to prepare it, and will neither spare Labour nor Cost; it is impossible to afford good *Chocolate* at a low Price; and the most of those who sell their *Chocolate* at such easy Rates could scarcely buy the fine Sugar they ought to make Use of at the Price. Although some still cry up the *West-India*, *Spanish*, *Portugal*, and *St. Malo's Chocolate*, at this Time there is no Place in the World where they make better *Chocolate* than at *Paris*. I did not think it proper to give you the Composition here, since there are so many Books that treat of it, and the Compositions are so various, that every one is for pleasing his own Fancy. Nevertheless, I cannot forbear acquainting you with what is proposed by the *Sieur Blegny*, in his Book, who mentions the Flower of *Orejeucas*, to be added to the Composition, because it is a Drug which I believe to be imaginary, as not being able to know what it was, after the most diligent Search I could make. And the *Sieur Blegny*, who calls himself the Author of that little Book which I have just mention'd, had Reason to say he could not meet with it among the Druggists; for he could not give me any Account of it. When I ask'd him, before a certain Person, what the *Orejevalla* Flower was? he told me, it was what went into the Composition of the *American* or *Indian Chocolate*, which I suppose was what he had read somewhere. As to the *Achiott*, that is nothing else but what we call the *Rocou*, which is not made, as the said Author says, but as it is set forth in its proper Place in this Treatise; and if he had known that the *Achiott* was the *Rocou*, there are very few Grocers but could have furnish'd him with it; so that he needed not have put it in his Book, that he could not meet with it at the Druggists.

[*Chocolate* is made by attenuating the Oil of this Fruit by Heat; and, according to the different Degree of Heat, used in the making it, and the Spices mix'd with it, it is seen to have very different Effects in heating, or in only nourishing and strengthening. The best and nicest Judges are of Opinion, that the two Kinds of *Cacao*, mix'd together, make the finest *Chocolate*. The *Orejeucas*

Flower, which our Author thinks an imaginary Drug, is the Flower of the *Xochinacasthe seu flos Auriculæ*, *Hern.* 30. *R. Hist.* 2. 1671. *Orejeucas seu Orichelas*, *Hughes. Fructus oblongus cineraceus acidulus*, *C. B. Pin.* 406. It grows in *New Spain*; the Flower is very fragrant, and is there used sometimes in *Chocolate*.]

16. Of Vanilla's.

Pomet. THE *Vanilla's*, according to the *Sieur Rousseau*, are Pods of about half a Foot long, of the Thickness of a Child's little Finger, which hang upon a Plant of twelve or fifteen Foot high, that climbs like a Creeper; for which Reason it grows most frequently along Walls, or at the Roots of Trees, or some other Kind of Props, or the like, whereby it may be supported. The Plants have round Stalks, disposed in Knots like the Sugar Cane; from each Knot there put forth large thick Leaves, about a Finger's Length, which are green, of the Colour of the Stalk, and very like those of the great Plantane, after which come Pods, which are green at first, yellowish afterwards, and grow browner as they ripen. When they are ripe, the People of *Mexico*, those of *Guatemala*, and *St. Domingo*, gather them, and hang them up by one End in the Shade to dry, and when they are dry enough to keep, they rub them with Oil, to hinder them from drying too much, and prevent their breaking, and then they put them up in little Bags, of fifty, a hundred, or a hundred and fifty, to bring them hither. Nevertheless, there are some who value their Gain more than their Conscience, who let them hang upon the Stalks 'till over-ripe, and receive from them a black fragrant Balsam, that flows 'till the essential Parts of the *Vanilla* are exhausted, and it can run no more; and then they gather the Pods, and pack them up for Sale, as aforesaid.

The great Lords of *Mexico* are mighty Lovers of these Plants, as well because of the pleasant Smell of their Fruit, as they mix it plentifully in their Chokolade, as because of the great Profit they yield them in Trade. The *Spaniards* bring us this rich Commodity, and give it the Name of *Vanilla*, which signifies a Sheath, because the Pod resembles the Figure of a Sheath. It is of a pleasant Taste and Smell. Chuse such as are well fed, thick, long, new, heavy, not wrinkled, or rubb'd with Balsam, and which have not been kept moist, but are of a good Smell; and beware of those that are small and dry, and of little Smell; the Seed which is very little, is black and shining. The *Vanilla's* are much used in *France* for making up Chocolate, and sometimes



The Acajou

the Tree y^e bears y^e Acajou
Fruit of
y^e Acajou

Hermodactyle



Anacardium Pad.

The Plant y^e bears y^e Anacardium



Iujub.



Sebesten. or Indian Plum

to perfume Snuff. Some say they are good to strengthen the Stomach. As to the Balsam, the *Spaniards* keep that, for we have none of it brought to us.

Vanilla, or *Vanilla's*, is a Pod, of *Lemery*. about half a Foot long, and the Thickness of a Child's Finger, sharp at both Ends, of a dark Colour, a pleasant balsamick Taste and Smell, a little acrid, containing very small, black, shining Seeds: This Pod is the Fruit of a kind of *Volubilis*, or a Plant of four or five Foot high, which the *Spaniards* call *Campeche*. It rises like a Creeper, and winds about the neighbouring or adjacent Trees, upon Poles, or climbs upon Walls. The Leaves resemble those of *Plantane*, but they are larger and more fleshy. The Flowers are blackish. This Plant grows in *Mexico*, where the *Indians* call it *Tlixochitl*, and the Pod *Mecafutbill*.

Chuse such *Vanillas* as have the longest Pods, pretty thick and heavy, well fed, of a good Taste and pleasant Smell. It yields a great deal of Oil and volatile Salt; is cordial, cephalick, stomachick, carminative, aperitive. It attenuates viscous Humours, provokes Urine, and Womens Courses; is mix'd in Chocolate, and makes it agreeable both to the Taste and Smell.

[The *Vanilloes* are the Pods of the *Volubilis filiquosa Mexicana folis plantaginis*, R. Hist. V. 2. p. 1330. The Plant grows in *New Spain*, and other hot Countries; the Pod is flat, and contains a Multitude of small Seeds. Its principal Use with us is as an Ingredient in Chocolate.]

17. Of the Acajou.

Pomet. THE *Acajous*, or *Cashew Nuts*, or *West-Indian Anacardiums*, are the

Fruit, or rather the Seeds of a yellow Fruit, inclining to red, of the Size of a *Magdalen* Pear, or an Orange. The Tree which bears these is, according to the *Sieur Rousseau's* Letter, five or six Foot high, adorn'd with Leaves of a yellowish Green, and something of the Shape of the Ivy. The Flowers are small, and grow in Tufts, of a Carnation Colour, from whence comes a yellow Fruit, as said before; at the Bottom of which are placed the Seed, of the Bigness of a Chestnut, of the Shape of a Kidney, and of an Olive-Colour, and consisting of a white Kernel cover'd with a tough Skin; which, after it has been roasted, like a Chestnut in the Fire, is pleasant to eat. There is contain'd besides the Kernel of these *Acajous*, a black caustick Oil, which is a good Remedy to cure Corns upon the Feet, and take away red Spots in the Face.

The *Americans* cut the yellow Fruit in Slices, and eat it with Sugar, as we do a Lemon; as well to revive the Spirits as to cool them; they are full of a well-tasted Juice. Chuse such *Acajous* as are large and new, of an Olive-Colour, with white Kernels, which are certain Signs they are fresh, and not of a Chestnut Colour, which is a Token of their Age and over Ripeness.

[The *Cashew Nut* is the Seed of the Fruit of the *Anacardus Zeylanica folio nucis Juglandis*, Hern. Mus. Zeyl. p. 55. It hangs to the Bottom of the Fruit.

The Juice of the outer Rind is of some Use to take away Freckles, and the Kernel is eatable; but it is very little known as a Medicine.]

18. Of Anacardiums.

THE *Anacardium* is a Kind of a Fruit, brought from the *East-Indies*; the Tree which bears it has greenish Leaves, that are roundish; after which come Pods, of the Size of the large Bean, in which are usually inclosed two *Anacardiums*; which, when half ripe, are of the Colour of burnt Coffee; but when full ripe, they are of a shining Black. Chuse such as are large, well fed, new, dry, and have in them a white Kernel. They pretend that the green Fruit of these are a dangerous Poison, but otherwise when dry: After they are prepar'd in Vinegar, they become a good Purgative; but nevertheless they ought not to be meddled with, without the Advice of an able Physician. They yield an Oil like the *Cashew Nut*, which has the same Virtues.

Anacardium is a Kind of large Fruit, like the Chestnut, being in some Measure of the Shape of a Bird's Heart, whence it derives its Name: It is of a shining, black Colour, containing in it a white Kernel. This Fruit grows on a Tree in the *Indies*, whose Leaves are almost round, and the Fruit in Pods, of the Size of a *Windsor* Bean; holding each, not above two *Anacardiums*, which afford Oil, and are fold in great Plenty; they rarify and purge the pituitous Humours; are resolving; refresh the Brain, and strengthen the Memory, being taken in Decoction.

[These are the Fruit of the *Arbor Indica fructu conoide, Cortice pulvinato, nucleum unicum, nullo officulo tectum Claudente*, R. Hist. V. 2. p. 1566. It is a warm cordial Medicine, but is very little taken Notice of in the present Practice, and rarely to be met in our Shops.

19. Of Jububs.

Pomet. THE Jububs are the Fruit of a Tree which grows commonly in *Provence*, but chiefly in the Gardens of *Hyerès*, near *Toulon*, where it is in such great Quantities, that almost all we sell comes thence by the Way of *Marfeilles*: The Tree that bears them is of a moderate Height, and the Leaves are greenish, thin and fibrous; after which comes Fruit, of the Bigness of one's Thumb End; green at first, and something reddish as they ripen.

Chuse your Jububs fresh, large, well fed and fleshy, of a good Kind, that have been well dry'd, that they may keep without Danger of rotting; and take Care that they be not kept in Places too moist, or gather'd when they are too ripe, for that is the Way to lose them all: They taste, when gather'd, and rightly manag'd, like Raisins of the Sun, with one Stone, like a Prune Stone, in the Middle. *Dodonæus* saith, they are of two Sorts, viz. the Red and White; and the Red are of three Kinds, to wit, *Jujuba major*, *Jujuba minor*, and *Jujuba Agrestis*; the first, which grew originally in *Africk* and *Egypt*, and were thence transplanted into *Italy*, *France*, &c. are those which we chiefly use, being moderately hot and moist. This Plum is an excellent Pectoral, and opens the Body, temperating the Sharpness of the Blood and Humours; it expectorates tough Flegm, and is good against Coughs, Colds, Hoarseness, Shortness of Breath, Wheezings, Roughness in the Throat and Wind-Pipe, Pleurifies, Heat of Blood, Exulceration, or Excoriation of the Kidneys and Bladder, cleansing them; and by their mucilaginous Quality, making the Passages slippery: They are used, in a Decoction, for Stone, Gravel, &c. or for opening Obstructions in the Liver, Spleen, Dropsy and Jaundice, by Urine.

Jujuba, or *Zizipha*, a large Fruit of **Lemery.** the *Ziziph* Tree, is like a moderate siz'd Prune or Plum, oblong or oval, red without, yellow within, fleshy and tender, of a sweet and vinous Taste, having a tough Skin, and a hard, strong Kernel: The Fruit grows upon a Tree call'd *Ziziphus*, by *Tournefort*, and wants little of the Plum-Tree in every Respect; but is crooked, cover'd with a rough uneven Bark, that cracks or splits: The Branches are hard, furnish'd with strong Thorns; the Leaves oblong, something hard, terminating in a blunt Point, of a fine, shining, green Colour, slightly indented on their Sides; the Flowers growing among the Leaves, being ty'd by short

Stalks, each of which, according to *Mr. Tournefort*, is commonly composed of five Leaves, like a small Rose, which is placed in the Middle of the Cup, of a grassy or pale Colour: When the Flowers are gone, the Fruit, or Jububs, succeed; being green at first, and reddish as they ripen. This Tree grows in the hot Countries, and is very common in *Provence*, and in the Isles of *Hyerès*, near *Toulon*, from whence the dry'd Fruit are brought. They are pectoral and aperitive, being usually employ'd in Ptisans for Diseases of the Breast; they sweeten the Sharpness of the Humours, by their sweet and glutinous Substance, and provoke Spitting.

[The *Jujubes* are the Fruit of the *Jujube arabum*, sive *Zizyphus Dodonæi*, Ger. 1318.

They are esteem'd warm and moistening, and are recommended in Stranguries, &c. but are at present little used.]

20. Of Sebestens.

Pomet. *Sebestens* are a blackish Fruit, that are brought by the Way of *Marfeilles*, from the *Levant*, &c. The Tree that bears this Fruit is about the Height of our common Plum-Trees; the Leaves green, and almost like them, but that they are a little rounder: The Flowers are whitish, in Form of a Star, from whence comes the Fruit, about the Size of one's Finger's End; it hangs to the Branch by a little white Cup, as it is brought to us.

Chuse your *Sebestens* fresh, plump, moist, and full of Pulp, of a black brown Colour outwardly, adorn'd with white Caps, which is an essential Sign of their Newness, and such as have neither been wash'd nor rubb'd; the sweet, viscous, and fleshy; therefore reject such as are otherwise, and whose Caps are gone, which is a Token they have been wash'd or rubb'd; and also take Care not to chuse those that are hard, small, and of a reddish Colour.

The Way of using the *Sebestens* is much the same as that of the Jububs, and their Virtues alike, so that one is frequently used for the other. The *Egyptians* make a gluey Sort of Birdlime of this Fruit, which is call'd *Alexandrian Birdlime*; but as this seldom comes amongst us, we use that which is made in several Parts of *France*, in *Normandy*, and about *Orleans*. This Birdlime is prepared from the Holly-Tree, steep'd in a Pond or Pit, and afterwards beat together in a Mortar, 'till it is reduced into a Paste, and then well work'd with the Hands, and wash'd in Water; it is put up in Barrels, to be sent to several Parts: The Choice of it is, to take such as is the greenest, the least fetid, and freest from Water that

that can be got; the Use of it being to catch Birds, and other Creatures of the like Nature.

Schroder says, the Plums of the *Sebesten-Tree* are small, with a three-corner'd Stone; temperate in respect of Heat, and moist, soften and prevent, or allay the Acrimony of Humours; are used chiefly in Defluxions of Rheum, Obstructions of the Belly, and quench Thirst. You may make a Decoction of them with Wine and Water, to move the Belly gently to Stool; or make an Electuary of them thus: Take *Sebestens* without the Stones, Prunes ston'd, Pulp of Tamarinds, of each five Ounces; Violet Water two Pints; Juice of the Herb Mercury, clarify'd, four Ounces; Sugar Penids half a Pound; of the four greater cold Seeds, blanch'd, of each two Ounces; Diagridium three Drams: Boil the *Sebestens*, Prunes and Tamarinds, in the distill'd Water, which being dissolv'd, mix with the Juices; then add the Penids and Pulp of Prunes, which being dissolved also, mix the Diagridium and make an Electuary. It purges, and carries off the Sharpness of Humours, and provokes to Urine.

Sebestena, or *Prunus Sebesten*, is a *Lemery*. Fruit of the Size of a small Acorn, that is oblong, roundish and black, wrinkled as a little Prune, of a sweetish, viscous, or clammy Taste, cover'd at the upper End with a small woody Cap, of a whitish Grey. The Fruit grows upon a Tree of the same Name, resembling the Plum-Tree, only that the Leaves are a little more indented; the Flowers are small, white, and like those of the *Geranium*. This Tree grows in *Syria*, *Egypt*, &c. Make choice of your Fruit according to the Directions given by *Pomet*; they contain in them much Oil, and some essential Salt; are moistening, emolient, sweetening, pectoral, and serve to open the Breast, cleanse the Reins, provoke Spittle, and relax the Bowels.

[*Sebestens* are the Fruit of the *Myxexis Domestica*. J. B. 1. 198. *Prunus Sebestina Domestica*. Jonf. Dendr. p. 85.

The Tree is common wild in *Egypt* and *Asia*. The Fruit is emolient, and recommended to blunt the Acrimony of the Humours; but is very little now in Use.]

21. Of Dates.

Pomet. THERE are three Sorts of *Dates* which we sell; the best are those which grow in the Kingdom of *Tunis*.

There are some that come from *Sally* in *Africa*; but they are lean and dry, and differ much from those of *Tunis*, which are fat and fleshy. We have others that are brought from *Provence*, which

sell well, being large, fleshy, fair without, and white within; but these are very subject to damage in keeping. The Tree that bears this Fruit is the Palm, which is so well known throughout the whole World, it would be unnecessary to describe it.

Chuse such *Dates* as are large, full and fleshy, of a golden, yellow Colour without, and white within; the Taste sweet and pleasant; let the Pulp be firm, white about the Stone, and reddish towards the Bark; of a *Malaga* Wine-like Taste, and such as, being shaken, make no Noise: If they are small, hard, without Pulp, or rattle, they are naught: Those of *Tunis* are worth much more than those of *Sally* or *Provence*, as observ'd before. *Dates* are so common, in some Parts of the World, that they serve for the daily Subsistence of more than an hundred Millions of Souls; but for medicinal Uses, they are not much employ'd, saving in the *Diaphœnicon*, some pectoral Ptifans, with *Sebestens* and *Jujubs*, &c. besides which, they are frequently eat as other Fruit.

Dactyli, or *Fruetus Palmæ*, the *Dates*, are an oblong, roundish Fruit, *Lemery*. a little larger than one's Thumb, fleshy, of a yellowish Colour, sweet and agreeable to the Palate, being closed in a long, round, strong, hard Nut, of an ash-colour'd Grey, cover'd with a little, thin, white Skin: They are brought chiefly from *Tunis* in *Barlary*; where they grow upon a large Tree, called *Palma Major*, or *Palma Dactylifera*, whose Trunk is large, round, streight, high, cover'd with a thick Bark, rising all the Way, with several scaly Knots, which make it advantageous to climb; the Leaves only grow at the Top longwise, pointed as those of the Flower-de-Lis, spiring, and opposite one to the other, about four Foot long, and as thick as one's little Finger; triangular, hollow, spongy, and bending Archwise; the Flowers are white, and grow together on a Cluster, like a Bunch of Grapes, and are succeeded by the *Dates*; which, when ripe, serve for the Food, or Supply, of vast Numbers of People in the *Indies*, *Syria*, *Africa* and *Egypt*; but what are brought hither, serve only for physical Uses, being deterfive and something astringent; they allay the Acrimony of the Stomach, strengthen the *Fœtus* in the Womb, moderate the Scouring of the Guts, and are cooling in inflammatory Fevers: They are reckon'd peculiarly serviceable to destroy all tartarous Mucilage, and other gross Humours, that breed the Stone, Gout, and Rheumatism.

[*Dates* are the Fruit of the *Palma vulgaris*, Park. 1545. *Palma major*, C. B. Pin. 506. *Palma Dactylifera major vulg.*, Hern. Par. Bat. Pr. 366. It is common in *Egypt*, and other hot Countries.

Countries. Before the Fruit is ripe it is something astringent, but when thoroughly mature it is of the Nature of the Fig, and sometimes used in Cataplasms, as Figs are; but they are seldom seen in Prescriptions at present.]

22. Of Palm Oil.

Pomet. **P**alm Oil, or Oil of Senega is an unctuous Liquor, as thick as Butter, of a gold-colour'd Yellow, and a Violet or Orrice Smell, especially when it is new and right. This Oil is made by Decoction or Expression from the Kernel of a Fruit that grows by Clusters, of the Size of an Egg. The Tree which produces this, is a Sort of Palm that is common in *Africk*, especially at *Senega*, and in *Brasil*. The *Africans* make this Oil in the same Manner as they make Oil of Bay-Berries at *Calvisson* in *Languedoc*; and it serves them to eat, as we do Butter: As to that which is old made, they burn it in Lamps.

Chuse your *Palm Oil* fresh and new, of a good Smell, and sweet Taste; so that it be as pleasant and grateful as the best fresh Butter we have, and of the highest Colour you can get. The white Colour it acquires by Age, has made some People fancy that the *Palm Oil* is white: Take care you do not buy such as is compounded of Wax, Oil Olive, Orrice Powder, and Turmeric, as it happens to some you may meet with, where the Seller understands how to counterfeit it; but the Cheat is easy to detect; because the true *Palm Oil* loses all its Colour, if it is exposed to the Air, which the Counterfeit Oil will not do; besides, the true *Palm Oil*, that becomes white, in course of Time, will recover its natural Colour, by melting it over a gentle Fire, which happens not to the adulterate Composition. They use this Oil to ease the Gout, and cure cold Humours.

[The *Palm Oil* is made from the Fruit of the *Palma Guineæ*, I. B. 1. 369. *Palma major Dactylifera et vinifera Guineensis*, Jons. Dendr. 139. It grows plentifully wild in *Guinea*. The Oil is good as a Liniment in Rheumatisms and Palsies, and to strengthen the Nerves.]

23. Of Cokar Nuts.

Pomet. **T**HESE are Fruit of various Sizes and Shapes, as represented in the Figures of them, which are engrav'd from the Originals which I have in my Hands. They are proper for several Sorts of Works; as Bowls, Beads, Snuff-Boxes, &c. The Place in *Europe*, where they trade most in these Kind of Fruit, is at *Dieppe*. I shall not here describe the

Trees which bear them, but shall only say, that they are different Sorts of Palm Trees; but as so many Authors have treated of them, I shall add nothing more. The middle-siz'd *Cocos*, which we have from the *Antills Islands*, make a considerable Trade, and furnish the Workmen with considerable Business, that deal in *Beads* and *Snuff-Boxes*; and the larger Sort is of such vast Use in *Africk*, *Arabia*, and several other Parts of the World, that many Millions subsist by Means of it only, as it produces so many Necessaries of Life; which were I to enter into a Detail of, it would swell this Chapter to too great a Bulk. There is another Sort, but much more scarce, which *J. Bauhinus* calls *Nux Indica ad Venena celebrata*; *five Coccus Maladivæ*; the *Indian Nut*, famous against Poison, or the *Maldivæ Nut*. I have one of these, which differs from the common Kind, in that it is more long shap'd, and pointed, and has a browner Shell: The high Virtue ascrib'd to this, is the Reason why it is so very scarce and rare.

The *Cokar-Nut* grows plentifully in the *Spanish West-Indies*; as *New Spain*, *Lemery*, *Campechy*, *Bay of Mexico*, *Cuba*, *Hispaniola*, *Guatimale*, *Jamaica*, &c. as well as in the *East-Indies*. The Tree ascends direct and high, having on its Top a Tuft of Palm-like Branches, of a most beautiful Figure, bringing forth monthly Clusters of very large Nuts; containing within a very large Kernel, which eats as pleasant as an Almond, with a milky Juice, which is drank for quenching Thirst.

The Kernel is cover'd with a very hard Shell, of which the Turners make Vessels and drinking Cups; some so large as to hold a Quart, three Pints, or more; and the Shell is cover'd with a thick Rind, which being beaten, becomes hard like Flax or Hemp, of which Cloathing is made, Cords, Ropes, and the like; so that the *Cokar-Nut Tree* seems to be well provided with all Necessaries for human Life; as Cloathing, Vessels of Use, Meat, Drink, &c. The milky Water, within the Nut, is pleasant, both to quench Thirst, and also to nourish the Body; and by the Heat of Fire it will thicken into a Jelly, like a Custard made of Cows Milk; otherwise it is an excellent pleasing Liquor, cooling, moistening, and sweetening the Juices; for which Reason it is said to be good against Consumptions and Hætick Fevers, abating all preternatural, and irregular Heats. The Branches of the Trees being cut, yield a pleasant Liquor, which being distill'd, gives a strong *Aqua Vitæ*: The Kernel, besides its serving for Meat, yields, by Expression, an Oil, which is better than any Oil Olive, not inferior to the best Oil of Sweet Almonds. Of the Branches they make Houses; of the Trunk their Boats and Ships; of the



24. The Palm bearing
Cokar Nuts in their Shells. Dates.



ix Vomica.

Long Cokar.

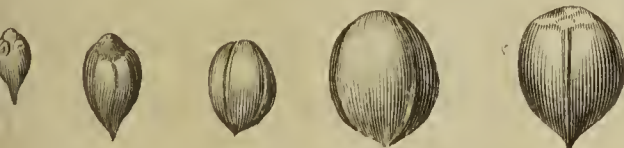


The Palm fruit of w^{ch} Palm oil is made.

Palm fruit of y^e Isle
of Ceylan.



Levant Nut



Nuts of diverse Sizes without
their Shells. The Maldiv Nut.

the coarse Hards, on the Outfides, their Cables; and of the finer Stuff, Sails for Ships, and Cloth, as aforesaid.

[The common *Coco* or *Cocker Nut* is the Fruit of the *Palma Indica nucifera Coccys dicta*, R. Hist. 2. 1356. *Palma sive nux Indica vulgaris ferens Cocos*, Park. 1596. This grows both in the *East* and *West Indies*.

The *Maldivie Nut* is the Fruit of the *Cocos de Maldiva sive nux Indica ad Venena celebrata*, R. Hist. 2. 1359. *Palma Coccifera figura Ovali*, C. B. Pin. 509. This grows only in the *East Indies*, and has the Character of a very great Medicine in Palsies, Epilepsies, &c. besides its Virtues in resisting Poisons, but is little us'd at present.]

24. Of the Vomiting-Nuts.

THE *Vomiting-Nuts* are round flat *Pomet.* Nuts, of the Size and Shape represented in the Figure; they are of a greyish Colour on the Outside, and being slit in two, are of divers Colours, as yellow, white, brown, &c. within. These Nuts, according to the Relation of some Persons, are the Kernel of a Fruit of the Size of our Rennet Apples, which grow upon a large Plant in several Parts of *Egypt*, from whence come the *Vomiting-Nuts* we now sell. The best Relation we have of the Growth of them, as well as their Description, is given by Mr. *Paul Hermans*, Physician and Botanist of *Leyden*, one of the most able Men of his Age. This Relation of his has a great deal of Analogy with what I have said of them, except that he says they grow in the Isle of *Ceylon*, which may be, and yet they may also grow in *Egypt*, for every Body knows the same Fruit may grow in several different Places. He says likewise, that there is another Sort of *Nux Vomica*, which comes from the Isle of *Timor*, and that the Fruit is four Times smaller than that of *Ceylon*; and that the Plant is called *Lignum Colubrinum*.

They are brought from *Egypt*, the *Levant*, and *East-India*, and are generally flat, round, and of the Thickness of a Crown Piece, almost like Lupins, but larger, hollowish on the one Side, and a little bunch'd round on the contrary; of a greyish Colour, with a Kind of Freeze, or soft Cotton, covering the whole; but of so hard and horny a Substance, that it cannot easily be beaten into Powder, but must be grated, or ground in a Horse-Mill: The chief Use of them is to infatuate Birds, as Crows, Ravens, Pigeons, &c. It is said it will kill Dogs, Cats, and other Creatures, if it be given mix'd with their Meat: And it is probable, that if it kills not such Creatures as Wolves, Foxes, Tygers, &c. yet pos-

sibly it may so stupify them, that they may the more easily be master'd and kill'd by Mankind: It is also mix'd with Paste, and given in a Bait to catch Fish withal. It has been given inwardly, to three or four Grains, for several Intentions, but is much better let alone, since there are so many Remedies that may be used with less Danger.

Nux Vomica is a little flat Fruit, as round as a Farthing, downy or lanuginous, of a greyish Colour, hard as Horn, of various Colours within, sometimes yellow, sometimes white, and sometimes brown: Some People believe this to be the Kernel of a Fruit as large as an Apple, that grows upon a great Plant in several Parts of *Egypt*; but the Truth is, no Body as yet truly knows the Origine of the *Vomiting-Nut*, and there is nothing to be depended on in the Histories concerning it. Chuse such as is large, clean and new; it is employed chiefly for intoxicating of Birds and Fish, though it is not poisonous if given to Men, but may be used in small Quantities; and is reckon'd deterfive, drying, resolute, being applied externally and internally: It is commended as useful to resist Poison, and drive away Melancholy and Vapours by Perspiration.

[The *Nux Vomica* is the Seed of the *Nux Vomica major et Officinarum*. Par. Bat. Prodr. 357. *Malus malabarica fructu cortice Amaricante semine plano compresso*. R. Hist. 1661. *Solanum aboreum indicum maximum foliis Ænoplæ sive Napææ majoribus fructu rotundo*. Breyn. Prodr. 2. 92.

The *Lignum Colubrinum* is the Root of a smaller Species of this Plant, as mention'd before in its proper Place.

It is probable that the *Nux Vomica* becomes a Poison by its extreme Bitterness, which must make an insupportable Impression upon the nervous System, as we find all bitter Drugs are poisonous to some Kinds of Animals, and even Bitter Almonds to Birds.]

25. Of the Coccus Indus, or Levant Nut or Berry.

THE Berries which we sell by the Name of the *Levant*, or *Eastern Pomet.* Berry, are a small Fruit, of the Size of a good large Bead, roundish, and something of the Shape of a Kidney, as you will see represented in the Figure. They are of a reddish Colour, and hang to the Plant which bears them, by a little Stalk of the same Colour. In these Fruits is found a little Kernel, which is divided into several

veral Parts, very subject to be worm-eaten, and the greatest Part of these Fruits come to us, for that Reason, empty; therefore chuse those that are heavy, fresh, the highest colour'd, largest, and least fill'd with Dirt that may be; they are serviceable to destroy Vermin, being usually mix'd with Staveacre. Some Authors also say, that they will intoxicate Fish, so that they may be easily taken.

There is another Fruit call'd the *Fagara* of *Avicenna*, which is almost like the *Levant Berry*, or *Coculus Indus*, and whose Figure is shewn with that of the Date, of which there are two Sorts. The first is so like the *Coculus Indus*, that if it were not for a thin greenish Covering that it has, it wou'd be hard to distinguish them. The second is of the Figure and Size of a *Cubeb*, of a brown Colour, and aromattick Smell, and the Taste a little bitter and piquant; both partake of the Nature of the *Cubeb*s, being good to strengthen the Stomach, assist Digestion, and expel Poison.

Some Authors call the *Levant Nut*, or the *Coculus Indus*, the *Baccæ Orientales*; they are Berries brought from the *East-Indies*, as also from *Turky*; round, and a little larger than Bay-Berries, hollow within, and of a brownish Colour, or rather blackish-ash Colour on the Outside; having a white Kernel within, and of a hot Taste, drawing Water into the Mouth; and as is reported, grow many together like Ivy-Berries, yet each by itself on a Stalk. Some will have them to grow on a Kind of Night-Shade, others on a Kind of Tithymal or Spurge; but the Truth is scarcely yet known: They are chiefly used for Baits to catch Fish withal, or in a Powder to kill Lice and Vermin in Children's Heads.

[The *Cocculus Indus* is the Fruit of the *Solanum racemosum Indicum arborescens, Cocculus Indus ferens*. R. Hist. 115. *Arbor indica Cocculos indicos ferens*. Breyn. Prodr. 2. 19. it is common in *Malabar*. Four Grains of this Fruit taken inwardly, cause Hick-ups, Nausea's and Faintings, and a larger Dose is poisonous. The Powder, mix'd with Flour and New Cheese, intoxicates Fish so, that they may be taken with the Hand. Some People are afraid of eating such Fish; but Experience has prov'd that their Apprehensions are without Foundation.

The *Fagara* is the *Cubebis Affinis Fagara major*. C. B. Pin. 412. *Fagara seu Cayutona Luzonis*. Com. Syll. 74. These are brought to us from the *Philippine-Islands*; but seldom used in Medicine.]

26. Of Cassia.

WE have four Kinds of *Cassia*,
Pemet. 1. That of the *Levant*. 2. That of *Egypt*. 3. That of *Brazil*; and

4. The *Island Cassia*: They are all the Fruits or Pods of different Species of the same Tree, which have Leaves some longer some shorter, and yellow Flowers. The first and most esteem'd is that of the *Levant*. This *Cassia* grows plentifully in several Parts thereof, from whence it is now brought by the Way of *Marseilles*. The Leaves of this are green, and the Flowers yellow.

Chuse this *Cassia* fresh, in thick Pieces, that are heavy, not hollow, of a brown Colour, whose Bark appears fine and white within, and such as is furnish'd with a black Pulp, and a white hard Stone or Kernel in Form of a Heart. This Pulp ought to be sweet, without being either sharp or musty, and such as will easily separate from the Pod. Beware that the Pods be not knotty or crooked, but even, and such as will not shake or rattle. Some will have it, that the true Way of distinguishing the *Levant Cassia*, is by a Ridge that runs the Lengthway of the Pods; which nevertheless is no general Rule, because there are Pods with this Mark frequently met with in the *Antilles*, or *Western-Islands*. The best Way is to take that of *Marseilles*, because there is none comes that Way but from the *Levant* and *Egypt*.

27. Of Egyptian Cassia.

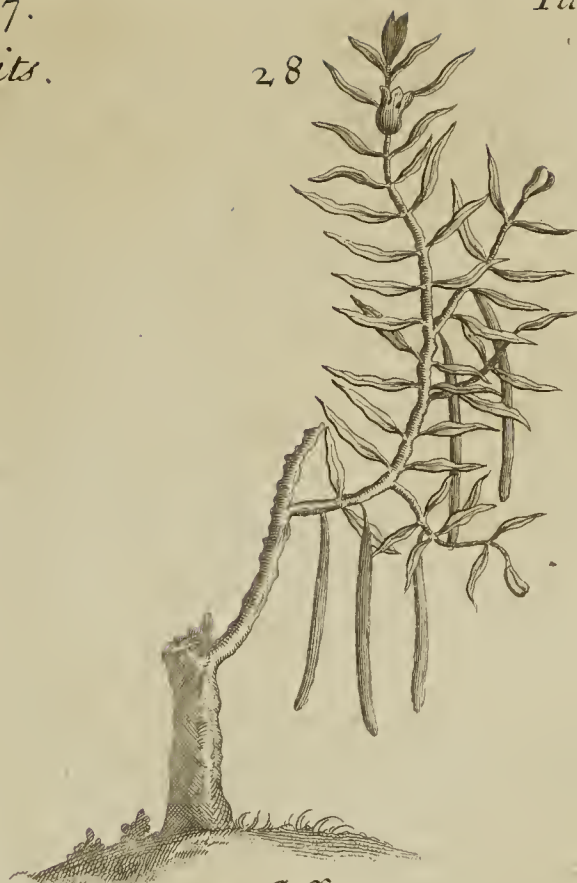
THE *Egyptian Cassia* is a Fruit like the former, only that it is thinner, and a great deal tenderer. The Tree that bears this *Cassia* grows to a prodigious Size; it is as large as any Tree we have in *France*, and differs not from the former but as the Leaves are much smaller. They meet with such vast Quantities of these Trees throughout *Egypt*, that the *Cassia* they produce goes for almost nothing there, especially at *Grand Cairo*. The *Egyptian Cassia* should be chosen as that of the *Levant*; it shou'd be such as will break under the Thumb in cleaning. The *Levantine* and *Egyptians* make a Confection of the *Cassia*, while fresh, which they keep to loosen the Belly, it being a Medicine very convenient, and easy to take. The *Cassia* Confect ought to be new, and neither aigre nor musty. Some People use it here, in Imitation of the People of the *Levant*, to keep the Body open.

28. Of Brazil Cassia.

THIS grows in *Brazil*, on Trees whose Leaves, Flowers, and Fruit, are as in the Figure represented. The *Cassia* which these Trees produce is so large, that if I had not seen a Piece in M. *Tournefort's* Hands of about a Foot and a half long, and the Thickness of a Man's Wrist



Cassia of y Levant.



Egyptian Cassia.



Brasil Cassia.



Cassia of y Islands.

Wrist, I cou'd not have believ'd that there was any *Cassia* so thick. But this Fruit is of little Use: But the *Cassia* we have the greatest Dealings in, is that we have from the *American Islands*.

29. Of the Island Cassia.

THE *Cassia* of the Isles is that which at present is most used, and is a Fruit of the same Nature with the former; all the Difference is according to the Places where it grows. The *Antilles* are so full of these Trees, that the *Cassia* of those Parts costs them nothing but the Trouble of gathering. It is the Profit or Perquisite of the Seamen who gather it, and stow it at the Bottom of the Ship and amongst other Goods; which is the Reason why it oftentimes comes so dirty, being full of Sugar and Filth that it gathers from the other Ladings in the Ship: Chuse such as comes nearest to the Fineness and Goodness of the *Levant Cassia* that you can get.

Schroder says, that which comes from *Brazil* purges more in one Ounce, than that from *Egypt* in two; yet that brought from the *East-Indies* and by the *Levant*, is accounted the best. That from the *West-Indies* is generally large and thick rinded, and not so pulpy, and therefore worth much less than the *East-India*. The Pulp gently loosens the Belly, and brings forth the Excrements without griping; it is temperate in respect of Heat or Cold, and moderately moist. It is good for such as are troubled with Fevers, the Pleurisy, or any Inflammation of the Liver or Spleen, being mix'd with Water, and Drinks of a cooling Nature. It is good to cleanse the Reins and Ureters, to bring forth Gravel and Stone, if drank in a Decoction of Cicers, Parsley-Roots and Liquorice. It is extracted by forcing the Pulp, taken out of the Cane, through a Sieve, under which is a Vessel of hot Water, that by the Help of the Vapours, the Pulp being stirr'd about in the Sieve, may the easier pass thorough, when hot; you ought to extract it but just at the Time of using, because it grows sour with keeping. There are several compound Extracts of it, according to the Nature of the Occasion.

Cassia fistula Alexandrina, sive purgans, Lemery. or *Canna fistula*, is a Pod, the Length usually of a Man's Arm, thicker than one's Thumb, and almost round or cylindrick, woody, of a blackish Colour. The Bark is as hard as Wood, composed of two Parts, equally join'd together, which cannot be separated but by breaking their Junctures. The Hollows or Cells are divided by thin Partitions, but very hard ones; and are fill'd with a Pulp or Substance like

Marrow, that is liquid, black, and as sweet as Sugar. Each of these Cells contains a thick Seed, like a little Pea, flat, and almost round, of a yellow Colour. This Pod is the Fruit of a large thick Tree which grows in *Egypt*, the *Indies* and several other Parts of the World; the green Leaves much resemble those of the Walnut-tree; the Flowers grow in Numbers upon one Stalk, composed each of five Leaves, disposed in a Circle, of a yellow Colour.

When the Flowers are fallen, the *Cassia* Sticks grow out and harden themselves, so that they break one against the other, when the Wind is strong, and make such a Noise, that they may be heard two Leagues round. The best *Cassia* is that which comes from the *Levant*; but it is so dear and scarce in *France*, especially in War-time, that we are obliged to make use commonly of such as comes from *Egypt* and the *Antilles*; that of the *Levant* and *Egypt* is brought to us by the Way of *Marseilles*, but the others by *Dieppe*, *Rochele*, &c.

[It is to the *Arabians* we owe the Knowledge of this Medicine; for neither the *Greeks* nor *Romans* knew any Thing of it. The Tree which produces it is the *Cassia fistula vulgaris flore luteo*. Breyn. Prodr. 2. 26. *Arbor Cassiam solutivam ferens*. Bont. 101. It is common as well in *Egypt* as in both the *East* and *West-Indies*.

The *Alexandrian Cassia* is the best, but is very scarce: What we use now is the *American*, which is more acrid and griping than the *Alexandrian*; not that it is the Fruit of a different Tree, for the Tree that produces *Cassia* is the same in all Places; but the different Degrees of Heat make a Difference in the Fruit, for the Trees that now flourish in *America*, were first transplanted from the *Levant*, which is a Proof of the Truth of this.

The *Brazil Cassia* is astringent while green, but purges twice as strongly as any other Kind when ripe. The great Value of *Cassia* is, that it is a proper Purge in all Inflammatory Cases, which cannot be said of any other known Cathartick.]

30. Of Tamarinds.

Tamarinds are a sharp acrid Fruit, which are brought from the *Levant*, *Pomet*. sometimes in Bunches, but more commonly freed from their Stalks. The Tree which bears them has very small Leaves; after which come white Flowers, almost like Orange Flowers, from whence arise Husks that are green at first, and grow brown as they ripen, when the Inhabitants

tants of those Parts gather them in Clusters, and dry them a little before they are sent hither.

Chuse your *Tamarinds* fat or oily, fresh, of a Jet Black, and a sharp pleasant Taste, and such as have not been laid in a Cellar, which may be known by their too great Moisture, their Smell of the Vault, and their Kernels being swell'd. Avoid such as are adulterated with Molasses, Sugar and Vinegar. They are much used in Medicine, because of their cooling purgative Quality, and are Ingredients in many Official Compositions.

There grow a great many *Tamarind* Trees at *Senega*, where the Negroes make the Fruit into Cakes, after they have stoned them and freed them from their little Stalks, which they make frequent use of to quench their Thirst. These *Tamarind* Cakes are very scarce in *France*. They cleanse *Tamarinds* like *Cassia*, and with Sugar make a Confection of them which is not unpleasant.

Tamarindi, or *Oxyphœnica*, is a Fruit *Lemery*. about the Length of one's Finger, as broad and thick as the Thumb, cover'd with a green Bark at the Beginning, but that grows brown as it ripens, and is so tender that it easily falls off or separates. The Fruit affords a black, sourish, or sharp Pulp, that is grateful to the Taste; it hangs by long Fibres, or woody Strings, form'd in the Nature of a Bunch. They take this Pulp from the Seeds as they do that of *Cassia*.

The Tree which bears the *Tamarinds* is call'd *Tamarindus*, by *Gerard*, *Parkinson*, *Baubinus* and *Ray*; or *Siliqua Arabica*, quæ *Tamarindus*; or *Balam Pulli*, seu *Mederam Pulli*. It is as big as an Ash or Cherry-Tree. The Trunk is large, cover'd with a thick Ash-colour'd Bark. The Wood is hard, the Branches furnish'd with a great many Leaves, like those of Fern, long as one's Hand, compos'd of several small Leaves, ranged on each Side, hard, nervous, or stringy, green, of a pleasant Taste. The Flowers spring from Wings of Leaves join'd eight or ten together, like those of the Orange; white-colour'd, strip'd with red Veins. The Roots, are long, large and red. This Tree grows in several Parts of *India*, as *Cambaya*, *Senega*, &c. The Leaves are proper for quenching Thirst, and cooling in burning Fevers, being taken in Decoction.

The *Indians* separate the *Tamarinds* from the Bark and the Bunch, after having dried them a little; we have them frequently among us hanging one to another. Chuse the newest, that are hard as Paste, pulpy, black, of a sharpish grateful Taste and vinous Smell. They yield a good deal of acid Salt, Oil and Flegm; are deterfive, gent-

ly laxative and astringent. They allay, by their Sharpness, the too great Motion of the Humours, abate feverish Heat, cool, and quench Thirst. They are given in continual Fevers and Looseness, being taken in Decoction, Bolus, &c. or a Pulp may be made, as of *Cassia*. Dose from an Ounce to two. It strengthens the Stomach, creates an Appetite, resists vomiting and cuts tough Flegm. An Extract is made thus: Take *Tamarinds*, boil them in fair Water, strain, clarify with the White of an Egg, and thicken by consuming the Water to a due Consistence. Dose from two Drams to half an Ounce. It cools Inflammations of the Stomach and Liver, Reins, Back and seminal Vessels; is good in Catarrhs, Rheums, Eruptions of the Skin, salt and sharp Humours, *St. Anthony's Fire*, &c.

[*Tamarinds* are the Fruit of the *Tamarindus*, Rai. Hist. 2. 1748. *Tamarindus Derelside Prosperi Alpini*. Breyn. Prodr. 1. 51. The Tree is common in *Arabia* and in both the *Indies*.

What we use in Medicine is the blackish Pulp taken out of the Pod of this Tree, which is something like a Bean; this Pulp lies between two Shells, one of which is woody and the other membranous. We owe the Knowledge of this also to the *Arabians*; for neither the *Greeks* nor *Romans* knew any thing of it. The Pulp is very properly mix'd with *Cassia* as a Purge, and may be given alone as an Alterative. It is very proper to be mix'd in Juleps, &c. to quench Thirst in Fevers.]

31. Of Myrobalans.

Myrobalans are a Fruit of the Bigness of a Plum, which are brought to us dry from several Parts of the *East-Indies*. There are five Kinds of them; the *Citrine*, the *Indian*, the *Chebulick*, the *Bellerick*, and the *Emblick*.

32. Of Citrine Myrobalans.

THE *Citrine*, or yellow *Myrobalans*, are Fruit which grow in several *Pomct*. Parts of the *Indies*, especially about *Batatala* and *Goa*. When these Fruit are ripe they are of the Figure or Likeness of the *Mirabel* Plum, enclosing a Stone. The *Indians* candy this Fruit while green, as we do Plums, and they serve to loosen the Bowels. The *Portuguese* and *Dutch* bring us this Fruit thus candied for the same Purpose; but the greatest Quantity is brought us dry, which the Apothecaries keep for several *Galenic* Compositions, after the Stone is taken out. Chuse your *Citrine Myrobalans* of a reddish Yellow, long, well sed, heavy, and hard to break.

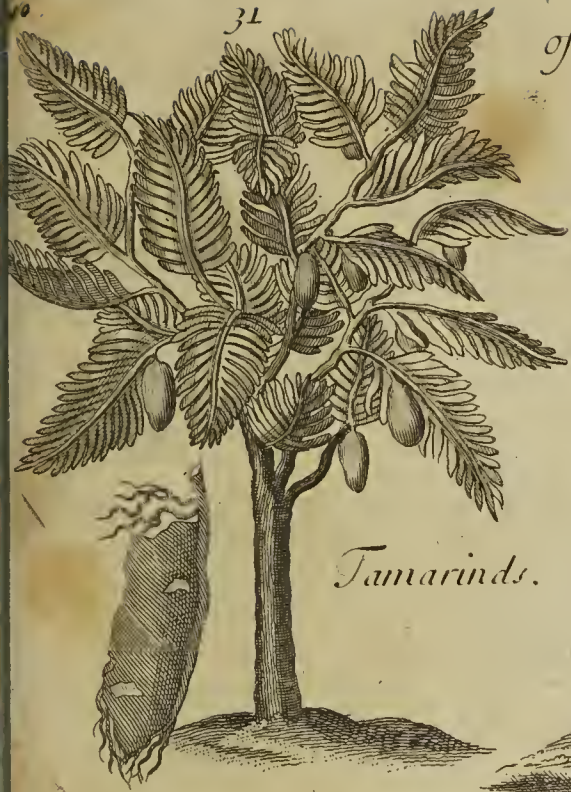
of

of Fruits.

31

32

33



Tamarinds.



Citron Myrcabalans.

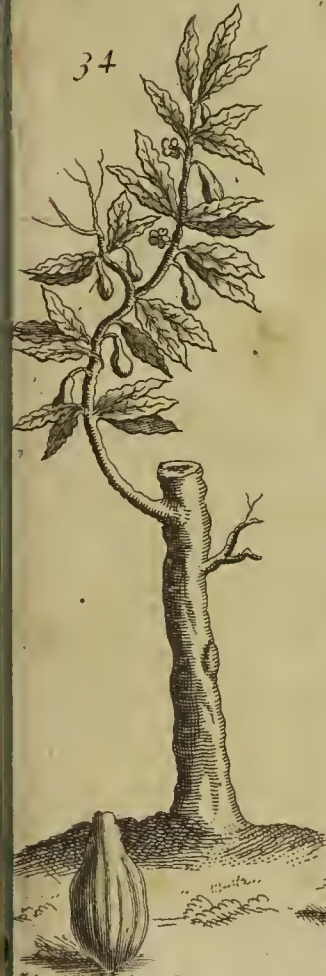


M. Indian.

34

36

35



Hebutick M.



Emblick M.



Bellerick M.

of an astringent disagreeable Taste; and beware of being impos'd upon by any of the other four Sorts, to wit, the *Indian*, *Chebulick*, *Emblick*, or *Bellerick*.

33. Of Indian Myrobalans.

THE *Indian Myrobalans* are a small long Fruit, of the Size of a Child's Finger End, black without and within, without Stone, and very hard, that are brought from the *East-Indies*, where they grow in great Quantities, and from whence they take their Name. The Tree which bears these has Leaves like a Willow, after which comes Fruit of the Size and Shape of a *Spanish Olive*, which are green at the Beginning, and grow browner as they ripen, and blacken in drying. As we have them now brought to us, they are hard, and black as Ebony. Chuse those that are well fed, dry, blackish, of a sharpest astringent Taste, and the heaviest you can get.

34. Of Chebulick Myrobalans.

THE *Chebulick Myrobalans*, or those call'd *Quebuli*, are a Fruit very like the *Citrine*, except that they are bigger, blacker and longer. The Tree which bears them is as high as an Apple-Tree, and has Leaves like the Peach, with Star-Flowers of a reddish Colour. These Sorts of Trees are met with about *Bengal*, where they grow without Culture. Chuse these *Myrobalans* fleshy, the least wrinkled and black that is possible, such as are resinous within, of a brown Colour, and such as have an astringent and bitterish Taste.

35. Of Bellerick Myrobalans.

THE *Bellerick Myrobalans* are a small Fruit of the Bigness of a Nutmeg, of a reddish Yellow without and yellowish within, in which is a Stone supply'd with a Kernel of no Virtue. The Tree which bears these is large, and has Leaves like those of the Bay-Tree. The Fruit is fasten'd to the Branches in Shape of little Gourds, of a yellow Colour. These ought to be chosen well fed and new, smooth, high colour'd, and of an astringent Taste.

36. Of the Emblick Myrobalans.

THE *Emblick Myrobalans* are a blackish rough Fruit, of the Bigness of *Galls*, easy to divide into Quarters; for which Reason almost all we have brought are after this Manner. The Trees that bear them are as high as the Palm, and the

Leaves are almost like the Fern. Chuse such as are least fill'd with Stones and other Trash, which they are very subject to; but, on the contrary, the most fleshy and blackest you can meet with. The *Indians* do not use the *Emblick Myrobalans*, either candied or raw, as the other four Kinds, except sometimes while they are unripe, for their Tartness; but they employ them to dye Skins green, as the Leather-dressers do *Sumach*, and also to make Ink. Some hold that all the *Myrobalans* grow upon one and the same Tree, which is far from Truth, as I have shewn; for, though they all grow in the *East-Indies*, some of them grow fifty Leagues from one another. The *Citrine Myrobalans*, which the *Indians* call *Arare*, purge Bile: The *Indian*, which those People call *Rezenuale*, and *Bellaris Gotin*, purge Melancholy: The *Emblick*, call'd *Annual* by the *Indians*, and the *Chebulick*, *Areca*, purge Flegm: Besides these five Species of *Myrobalans*, used sometimes in Pharmacy after the Stones are taken out, there is also a sixth Kind of *Myrobalan*, call'd *Dieacque-Nut*, which resemble *Citrine Myrobalan* in Figure and Size, but is black. This Kind, however, is never brought to us.

Myrobalani, or *Myrobalanes*, are a Fruit the Thickness of a Prune, which *Lemery* are brought to us from *India* dry. There are five Kinds of them; the best call'd *Myrobalani Citrini*; the second *Myrobalani Indici*; the third, *Chebuli*; the fourth, *Emblisi*; the fifth, *Bellerici*. The *Citrine*, or yellow Sort, are small, oblong or oval, of the Size of an Olive, or a little bigger, raised on several Sides, containing each a longish Stone. They grow upon a Tree resembling a Prune or Plum, but that bears Leaves like a Service-Tree. It grows without Management or Care in *India*, and particularly near *Goa*. This Kind of *Myrobalan* is the most used of all the Sorts in Physick. It ought to be chosen fleshy, heavy, hard, of a reddish yellow Colour, and an unpleasant astringent Taste.

Myrobalani Indici sive nigri, sive *Damascii*, the *Indian*, or black *Myrobalans*, are an oblong Fruit, of the Size of a small Acorn, rough and ridged lengthways, of four or five Sides, very hard, hollow within, and void of a Stone. They grow upon a Tree whose Leaves are like those of the Willow.

Myrobalani Chebuli, *Quebuli*, *Chepuli*, *Cepuli*, or *Chebulick Myrobalans*, are a Fruit like Dates, oblong and sharp, or pointed at the End which grows to the Tree, having five Corners or Ridges, of a yellowish brown Colour. They grow upon a large Tree like a Plum-Tree, in *India*, without Culture. The Leaves are like those of the Peach-Tree; the Flowers form'd Star-wise, of a Colour

four tending to Red. Make choice of large, fleshy, hard *Chebule Myrobalans*, of a dark yellow Colour, and an astringent Taste, inclining to bitter.

Myrobalani Emblici, *Embelgi*, *Emblegi*, *Ambeji*, *Dyseni*, or *Emblick Myrobalans*, are a Fruit that are almost round, and about the Size of a Gall-Nut, rough on the Outside, and ridg'd on the six Sides, of a dark brown Colour, containing each a thick Nut, like a Filbert, rais'd on six Corners, of a yellow Colour. The Fruit grows upon a Tree of the Height of a Palm, having long Leaves cut small and indented like the Ferns; we have these brought to us cut in Quarters, separated from the Stone, and dried. You ought to chuse them clean, without Shells, blackish without, grey within; of an astringent Taste, attended with a little Sharpness. The *Indians* dye Skins and make Ink with them.

Myrobalani Bellerici, *Belleregi*, *Bellegu*, or *Bellerick Myrobalans*, are Fruit of the Size of the common Sort, oval, or almost round, hard, yellow, more united, and less angular, or corner'd, than the others, containing each an oblong Stone, or Nut, as long as an Olive; the Stone encloses a little Kernel. The Tree that bears this has Leaves like the Bay, and is as big as a Plum-Tree. All these Sorts of Fruit yield a great deal of essential Salt and Oil, a moderate Quantity of Earth and Flegm: They are all gently purgative and astringent, something like *Rhubarb*; but the *Citrine* Kind are esteem'd more particularly for purging the bilious Humours; the *Indian* the Melancholy, and the others for the Serous and Flegmatick. They may be given from six Drans to double the Quantity, either in Pills, a Decoction in Wine, or an Extract made of the pulpy Part, by keeping them in Wine, then straining out the Infusion, and inspissating, or thickning, to a Consistence.

[Many have been of Opinion that the *Citrine* and *Chebule Myrobalans* were the same Fruit, only in different Degrees of Maturity, the *Citrine* being such as were gather'd before they were ripe, and the *Chebule* such as were suffer'd to remain on the Tree 'till perfectly mature: Others have thought all the Kinds to be produced by the same Tree; but the Truth certainly is, that they are the Fruit of five entirely different Trees.

The *Citrine* is the Fruit of the *Myrobalanifera Sorbi foliis*. *Jonf. Dendr. 83.*

The *Indian* is the Fruit of the *Myrobalanifera Salicis folio*. *Jonf. Dendr. 82.*

The *Chebule*, of the *Myrobalanifera Persice folia*. *Jonf. Dendr. 83.*

The *Bellerick*, of the *Myrobalanifera Lauri folio subcinereo*. *Jonf. Dendr. 84.*

And the *Emblick*, of the *Myrobalanifera foliis minutim incis.* *Jonf. Dendr. 83.* *Canna indica arborea Zanon.* *Myrobalanus Emblica foliis Securidacæ.* *Breyn. Prodr. 2. 74.*

The *Bengal Bean*, sometimes used in Medicine as an Astringent, is no other than the Fruit of the *Citrine Myrobalane*, hurt while young by the Puncture of an Insect, and growing by that Means of an uncommon Shape, as Plums, &c. will with us.]

37. Of the Areca.

THE *Areca* is supposed to be the Fruit of a Kind of Palm-Tree of *Pomet.* that Name. This Fruit is also call'd *Fansel*, the *East Indians* make a great deal of Use of it: It is of various Shapes, sometimes roundish, but flat at the End, sometimes oblong; and there is besides a Kind that is slender and black, very hard, and of an insipid Taste. They seldom send us the *Areca* with its outer Substance; and what we have of it is so hard, that if all Accounts did not assure us of it we could hardly conceive it could be eatable. The *Areca* is generally call'd *Mut*; it however is only a Kernel, commonly of the Shape of a Coat Button, but something more pointed, and is marbled within with black and white Veins like a Nutmeg. The Substance is so hard that it is like Horn.

The *Indians* make a Kind of Confect of the *Areca*, *Betel*, and Oyster-Shells burnt, which is in great Use among them. So many Authors have given the Preparation of this Mixture that I shall not repeat it here.

The Tree which bears the *Areca* is figur'd in the same Plate with the Peppers.

Areca Palmæ Species. Scalig. Areca sive Fansel Clus. in Garz. Ludg. Palma Lemery. cujus fructus sessilis Fansel dicitur. Avellana Indica. The Palm, whose Fruit is call'd *Fansel*, or the *Indian Filbert*, is a Species of the Palm-Tree, very high and streight, that grows in *Malabar*, and several other Parts of *India*. The Flowers are small, white and almost without Smell; the Fruit is of an oval Figure, the Size of a Nut, having a green Bark, or Peel, at first, which becomes very yellow as it ripens, soft and very hairy. The Bark, or Rind, being taken away, there appears a Fruit the Size of a Filbert, sometimes half round, sometimes pyramidal; which being broken, resembles that of a Nutmeg in Fineness.

The Fruit which the *Indians* call *Chesool*, not being as yet half ripe, make those that eat it giddy and drunk: When ripe it is insipid and astringent. They reduce it to Powder after having dried it in the Sun, and having mix'd it with *Betle*, burnt Oyster-

Oyster-Shells, Camphire, Aloes Wood, and a little Ambergrease, they form all into Troches, which they chew in their Mouths to make them spit and purge the Head.

[The *Areca* is the Fruit of the *Palma Arecifera nucleo versicolore nuci moschata simili*, Par. Bat. Pr. 361. *Palma fanfelifera*. Jonf. Dendr. 151. The Fruit is never used with us, but its inspissated Juice is what we call *Terra Japonica*, to be treated of hereafter.]

38. Of Coloquintida.

Pomet. *Coloquintida* is a Fruit of the Size of our Rhennet App'e, that grows upon a climbing or viny Plant, that has green Leaves, very like those of the Cucumber. The Fruit, being upon its Stalk, is of the Colour of the *Calebash*, and grows plentifully in several Parts of the *Levant*, from whence it is brought to us, freed from the fine Skin, or outward Shell, which is yellow.

Chuse the finest white *Coloquintida* Apples, that are light, round, and as little foul and broken as may be. Those who have their *Coloquintida* from *Marseilles*, or other Parts, order their Correspondents, if they wou'd serve them well, to take care that the Apples be not broken, and the Seed shak'd out; otherwise, out of an hundred Weight of *Coloquintida* they shall find sixty Pounds of loose Kernels, which are to be thrown away.

Coloquintida is one of the bitterest and most purgative Drugs in Physick; therefore it ought not to be used but with great Precaution, and especially not without throwing away the Seeds. It is a strong Purge, and is an Ingredient in many Compositions. The Troches of *Alhandal* made of it purge in a very small Dose, and an Extract is made from it which purges strongly in three, six, twelve, or fifteen Grains. The Confectioners cover these Seeds with Sugar, and sell them to catch or delude Children with. The Apothecaries keep them by them to powder, and put into their purging Compositions, especially the common *Lenitive Electuary*; which is a great Abuse, and a very wicked Practice.

Colocynthis, vel Colocynthis fructu rotundo minor, vel Cucurbita Sylvestris fructu rotundo minor: The lesser *Coloquintida* with the round Fruit, or the lesser wild Gourd with the round Fruit, is an Indian Plant which bears several Stalks that creep upon the Ground, hairy and rough. The Leaves grow singly, ty'd to long Stalks, running one from another, large, indented, hairy, rough and whitish, especially on the Outside, mark'd with several white Spots; the Flowers are of a pale Yellow,

succeeded by a Fruit about the Size of a moderate Orange, almost round, and naturally pretty dry and light, cover'd with a hard Bark, or entire Shell, that is of a yellowish shining Green. The *Indians* separate, or pull off this Bark, and having dry'd the fleshy Part of the Fruit, they bring these Apples of different Sizes, white, spongy, light, and of an intolerable Bitterness, which is what we call *Colocynthis Officinarum*, or the *Coloquintida* of the Sheps. There are several Cells, or Apartments, fill'd with large Seeds, like those of *Melon*, but shorter, more fleshy, and a great deal harder, of a yellowish Colour, inclining to White. They cultivate this Plant in several Parts of the *Levant*.

Chuse such as are fine, large, white Apples, fleshy, well dry'd, light, that will easily break, and are very bitter; they yield a great deal of Oil, together with volatile and essential Salt. The *Coloquintida*, separated from the Seeds, is call'd Pulp of *Coloquintida*, and is often used in Physick: It purges violently by Stool, is proper to evacuate the serous Humours of the more gross Parts of the Body, and is recommended in the Epilepsy, Apoplexy, Lethargy, Small-Pox, overflowing of the Gall, Sciatica and Rheumatism: but ought never to be administer'd alone, but used in Compositions, as Pills, Confections, Troches, and the like.

[*Colocynthis* is the Fruit of the *Colocynthis vulgaris*. Park. 160. *Colocynthis fructu rotundo minor*. C. B. Pin. 313. It is brought to us from *Aleppo* and the Island of *Crete*. It is the roughest Purge we know; taken in a large Dose it not only often brings away pure Blood, but also produces Cholicks, Convulsions, Ulcers in the Bowels, and fatal Hypercatharsis. It is used in Clysters in Apoplectick Cases; and mixed with *Ox Gall* will purge Children if apply'd to the Navel.

There is a larger Species of this, the *Colocynthis fructu rotundo major*, C. B. Pin. 313. Hist. Ox. 2. 27. which is said to possess the same Virtues, but is never used.]

39. Of the Grana Tiglia, or Indian Kernels.

THE *Grana Tiglia* are the Fruit of a Species of the *Ricinus*, very common in the *Antilles* Islands, which grows to the Height of a Fig-Tree, and is something like it in Figure: The Wood is soft and brittle, the Leaves are something like those of the Fig, green, soft, roundish, set irregularly on the Branches, and ending in three Points. Both the Wood and Leaves yield a milky Juice. The Flowers are composed of

of several yellow *Stamina*, supported by a five-leav'd green Cup. The Fruit are of the Shape and Size of a middling Nut; they are green at first, afterwards yellowish, and black when quite ripe: Each Fruit is composed of three *Capsulæ*, each including a white Kernel, cover'd with a black cartilaginous Film.

The Plant that bears this Fruit is call'd, in Mr. *Herman's Paradisus Batavus*, *Ricinus arbor fructu glabro Grana Tiglia Officinis dicto*, which signifies the *Ricinus* with the smooth Fruit, call'd in the Shops, *Tyle-Seed*, or *Tilli-Berries*. The Kernels ought to be chosen fresh, plump and fleshy; the least fill'd with Husks, Shells, or other Filth and Dirt that can be. Take care that they be the true Nuts, and that those of the *Palma Christi* be not impos'd upon you in their Stead, which is difficult enough to distinguish, when the *Palma Christi* is not speckled; for when it is so, you can scarce be deceiv'd; otherwise when it carries the Colour of the *Grana Tiglia*, 'tis not easy to know the Difference.

The Use of these Kernels is to purge, and they are indeed one of the greatest Purgatives we have, which makes it that we ought not to meddle with them, but with great Care and Precaution, not venturing to administer them but to strong and robust Bodies. As to the Quantity, one may give six, eight, or ten Grains in Weight, according to the Constitution. Some affirm that it is nothing but the thin Membrane, or Skin that covers the Kernel, which gives it the purgative Quality, which I cannot affirm positively, as I am not quite certain of the Truth of it.

Besides these, which we improperly call the small Kernels, we sell another Sort, call'd *Barbary Kernels*, large *Indian*, or *American Kernels*; which are the Seeds of what *Caspar Baubinus* calls *Ricinus Americanus, semine nigro*; the *American Ricinus* with the black Seed.

Besides these, there are two Sorts of *Indian Kernels*, which we do not trade in at all, by Reason of their great Scarcity. The first are Kernels of the Size and Shape of the Filbert, extremely white, and are cover'd with a hard Shell of different Colours; to wit, grey and reddish; these grow three together in a Shell, of a triangular Figure; the Plant which produces them being call'd *Ricinus fructu maximo*, or the *Ricinus* with the large Fruit.

The second Sort are little long Kernels, of the Bigness of a Pin's Head, spotted a little, like those of the *Palma Christi*, which grow together, in a little three-corner'd Pod, of the Size of a Pea: These little Pods, or Shells, differ from the *Indian Kernels*, in that the Shell is composed of five little hairy greenish Leaves. The

Plant which produces these, has Leaves like those of Dittany of *Crete*, only that these are greenish, and those of Dittany are whitish. These little Fruits are extremely scarce, and the Plant that bears them may be call'd *Ricinus Indicus fructu minimo*, the *Indian Ricinus* with the least Kernel. As for the *Palma Christi*, the great and the small, together with the Fruits of the Spurges, I shall say nothing of them, because many others have treated of them; and the rather because honest People will have nothing to do with them.

Ricinus Vulgaris, according to *Baubinus* and *Tournefort*, or *Cataputia major Vulgaris*, the common *Ricinus*, or greater Spurge, is a Plant that has the Resemblance of a small Tree, whose Stalk rises six or seven Feet high, thick, woody, hollow within like a Reed, branching at the Top, of a dark, purple Colour, cover'd with a white Powder like Meal; the Leaves are in the beginning round, but as they grow bigger they become corner'd, and divided like the Fig-Leaf, but much larger and soft to the Touch: The Flowers are so many pale *Stamina*, Threads, or Chives, which do not last long, and which leave nothing after them, either of Seed or Berry: These Fruits growing separately, either upon the same Stalk, disposed in the Nature of a Bunch that is prickly and rough to the Hand: Each has three Sides, and is made up of three *Capsulæ*, which contain severally an oval or oblong Seed; pretty thick, of a livid Colour, spotted without, and fill'd with a white tender Pith: When the Fruit is full ripe, it is full of Chinks, or Cracks, by which the Seed rushes out with Force; the Root is long, thick, hard, white and stringy; they cultivate this Plant in Gardens, not only for its Beauty, but because it drives away the *Moles*; it grows of different Sizes and Heights, according to the Places wherein it is set; for in *Spain* one may see them of the Height of a Man; and in *Candia* there are others that grow to the Bulk of large Trees, provided there be Poles for them to mount on. The *Ricini*, or *Tyle-Berries*, are used in Medicine, and contain in them Plenty of Oil and Salt; they purge violently all Sorts of Humours, and may be given from one Grain to six.

There is an Oil made of them by Expression, after they have been well beat, call'd in *Latin*, *Oleum de Kerua*, *Oleum Cicinum*, *Oleum ficus infernalis*: It purges only by rubbing the Stomach and Belly with it; it kills the Worms, cures the Itch, deterges old Ulcers, and allays the Suffocation of the Womb. These Berries are brought from *America*, and are call'd in *Latin*, *Grana Tiglia*, *Tyle-Berries*.

[We have four Kinds of the *Ricinus* Seeds brought over, tho' neither of them are now ever used in Medicine ; they are call'd, 1. the *Mexico* Nut, or *Mexico* Seed ; 2. the *Barbadoes* Nut ; 3. the *American* Purging Nut, and, 4. the *Tiglia*.

The first of these is produc'd by the *Ricinus five Caputia major vulgator*, Park. 182. *Nhambu Guachu five Ricinus Americanus*, Pif. 180.

The second by the *Ricinus Americanus*, Ger. 399. *Ricinus major Americanus Curcas dictus & faba Purgatrix Indiæ Occiduae*, J. B. 3. 643.

The third by the *Ricinus Americanus tenuiter Diviso folio*, Breyn. Cent. 116. *Ricinoides arbor Americana folio multifido*, Tourn. Inst. 366.

And the fourth, the *Grana Tiglia* of the Shops, by the *Ricinus arbor fructu glabro Grana Tiglia Officinis dicto*, Par. Bat. Pr. 370. *Palma Christi Indica*, Tourn. Mat. Med. 75.

The first of these Plants is a *Ricinus*, but the others are *Ricinoides*.

The second Species is common in *America* ; the Seeds of it are distinguish'd from the *Grana Tiglia* by a small black Speck at the End, which the others have not : They purge violently, but if the Skin that covers them be taken off, they lose their purgative Quality, and may be eaten with Safety. New-comers into *America* are often catch'd by the Natives, for want of knowing this Secret.

The *Grana Tiglia* are the most violent of them all ; two Grains of them will work vehemently, othupwards and downwards.

40. Of the White Pine Kernels.

Pomet. **T**HESE are a white Sort of little, longish, round Kernel, of a sweet Taste, to which they give the Name of sweet Pine Kernels. These small Kernels are cover'd with a thin Pellicle or Skin, that is light and reddish, and with a very strong Nut like Shell ; these Nuts, with their Kernels, are found in the Pine Apples, and are call'd, for that Reason, Pine Nuts, Pine Kernels, or Almonds of the Pine Fruit : Those we now sell come from *Catalonia*, as likewise from *Provence* and *Languedoc*, and several other Parts of *France*. To get the Kernels from the Pine Apples, they are thrown into a hot Oven, where the Heat makes them open ; after which they break the Nuts, and take from thence the Kernels, which are sent into different Parts of the World : Chuse them white, the largest and least mix'd with Shells and Skins that you can get, and which are of a sweet Taste ; in a Word, which neither smell of Oil or Mustiness : They are much used, especially in *Lent*, to make several Sorts of Ragous : The Confectioners cover

them with Sugar, after having stoved them some Time to take out the Oil : They make an Oil of them by Expression, which has the same Virtues with Oil of Sweet Almonds, especially when the Kernels are fresh and new : They are sometimes used to feed Canary-Birds ; and the Paste, after the Oil is press'd, is good to wash the Hands with.

There are several Sorts of *Pine Kernels*, from the several Sorts of Pines *Lemery*. which produce them ; I shall give you an Account of four ; one whereof is cultivated, and the other three wild.

The cultivated Pine is call'd *Pinus*, or *Pinus Sativa*, vel *Domestica*, by *Baubinus*, *Raius*, *Tournefort* and *Gerard* : The Trunk of which is large, upright, and tall ; naked, or bare at the Bottom, and full of Branches at the Top, cover'd with a rough, reddish Bark ; the Wood is firm, strong, yellowish and scented ; the Branches are disposed in Order ; the Leaves grow two and two, long and small like Threads ; hard, durable, and constantly green ; pointed or prickly at their Tops ; surrounded at the Bottom with a membranous Sheath. The Husks or Shells, are of several membranous Foldings, which contain two Cells, fill'd with nothing but a light Dust ; these Husks leave no Fruit behind them ; that growing upon the same Stalks with the Leaves, begins by a Button, and arrives to be a large scaly Apple, almost round, or pyramidal, of a reddish Colour : The Scales which form it are hard, woody, thicker commonly at the Point, or Top, than at the Bottom ; hollow lengthwise, with two Cavities, each of which contains a hard Shell, or oblong Nut, cover'd or edg'd with a thin, light, reddish Rind ; they call these in *Latin*, *Strobili Pinei*, seu *Nuces pineæ*, or Pine Nuts, which enclose in each an oblong Kernel, half round, white, sweet to the Taste, and tender.

The second Sort is call'd *Pinus Sylvestris*, by *Raius*, &c. or *Pinus Sylvestris vulgaris Genevensis*, by *Baubinus* and *Tournefort*, the common wild *Geneva* Pine ; this grows, usually, less high than the cultivated, but sometimes it attains to the same Height and Size ; its Trunk more frequently strait, but is sometimes crooked ; the Leaves are long and narrow ; the Fruit much smaller than the first, more resinous, and falls easily when ripe : This Tree grows in mountainous and rocky Places.

The third Sort is call'd *Pinus sylvestris Mugo*, seu *Crcin*, or *Pinaster Austriacus*, the *Austrian wild Pine*, being a diminutive Pine, which grows not above the Height of a Man ; it divides itself from the Root into several large Branches, that are flexible and pliant, spreading wide, cover'd with a thick, rough Bark ; the Leaves are of the

same Form, and disposed like the cultivated Pine, but much shorter, thicker, fleshy, less sharp at their Ends, and greener; the Fruit are not so big as those of the *Larix*, or *Cyprus*, but they are scaly, form'd pyramidally like other Pine Apples; the Root is thick and woody: This Plant grows in mountainous and stony Ground, as about the *Alps*, and among other Rocks.

The fourth Sort is call'd *Pinus sylvestris Maritima*, *conis firmiter ramis adhaerentibus*, by *Bauhinus*, *Ray* and *Tournefort*, or *Pinus sylvestris altera Maritima*, the wild Sea Pine: This is a small Tree whose Wood is white, strong-scented and resinous; the Leaves are like those of other Pines; the Fruit are in Pairs, and shap'd like those of the cultivated Pine, but a great deal less, being ty'd strongly to the Branch, by their woody Stalks: This Plant grows in mountainous Parts, near the Sea.

All the Pines that grow in the hot Countries yield Plenty of Rosin, by Incisions made in their Bark; they afford Abundance of Oil and essential Salt: The Bark and Leaves of the Pine are astringent and desiccative. We have *Pine Kernels* from *Catalonia*, *Languedoc* and *Provence*, which are taken from the Pine Apples, as taught by *Pomet*. Chuse such as are new, plump, clean and white, that have a good sweet Taste; they contain a great deal of Oil, and some Salt; are pectoral, restorative, sweeten and correct the Acrimony of Humours, increase Urine and Seed, cleanse Ulcers of the Kidneys, resolve, attenuate, and mollify, and may be used internally and externally.

[The *Pine Kernels* used in Medicine are produced by the *Pinus sativa sive Domestica*, Ger. 1173. *Pinus Urbana sive Domestica*, Park. 1534. They are emollient, agglutinant, and very nutritive, and therefore very good in Consumptions, and make a pleasant Emulsion, like Almonds.]

41. Of the White Ben Nut.

THE *Ben*, or *Behen*, is the Fruit of *Pomet*. a Tree that grows in *Arabia*; it rises to the Height of the Birch Tree; the Leaves are roundish, very small in Proportion to the Bigness of the Tree, rang'd by Pairs on Ribs, and at Distances from one Pair to another; the Fruit is a Pod, or Husk, five or six Inches long, composed of two furrow'd tough Pieces, of an insipid rather than astringent Taste, and enclosing, in different Cells, white triangular Seeds, as large as Hazel-Nuts, which have, under a thin Skin, a bitter oily Kernel, like that of a Nut, but whiter. The Tree which bears the *Ben* is very scarce in *Europe*, and the Figure

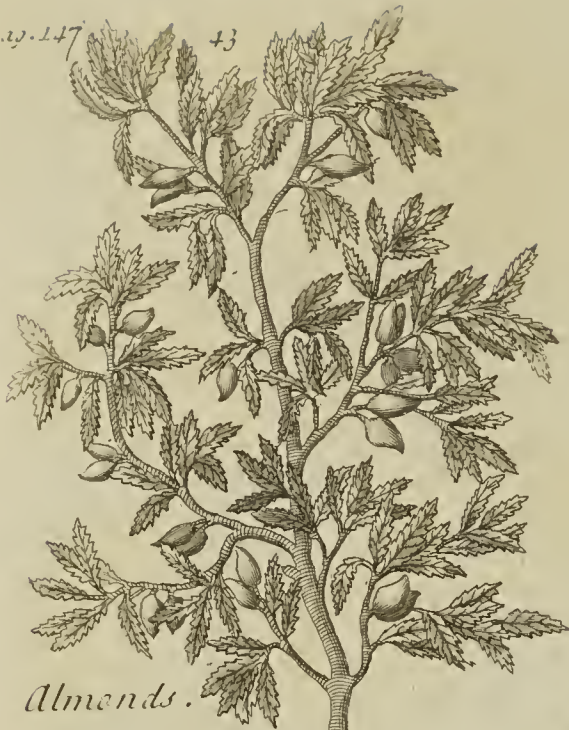
I here give you, is taken from that which is at *Rome*, in the Garden of Cardinal *Farnese*.

Chuse such Kernels as are white, fresh, and the heaviest you can get. They are used to make an Oil of, which has a great many good Qualities; the first is, that it has neither Taste nor Smell, and never grows rank, which makes it of great Use to the Perfumers and others, for taking the Scents of Flowers, as *Jessamine*, *Oranges*, *Tuberose*, and the like. With this Oil it is they make all their sweet Essences, adding to the Flowers asorenam'd, as they fancy, *Ambergrease*, *Musk*, *Civet*, *Benjamin*, *Storax*, *Balsam of Peru*, &c. They grow in *Syria*, *Arabia*, *Ethiopia*, and *India*, where they come to Perfection, which they scarcely ever do in *Europe*.

The whole Nut is of a purging Quality, and the dry Pressing, or Powder, after the Oil is taken out, is cleansing and drying; the Shells, or Husks, bind extremely; the Kernels bruised, and drunk with a little Ale, purge the Body from gross and thin Flegm; the Oil, which is drawn out of the Nut, does the same, provokes vomiting, and cleanses the Stomach of foul Matter gather'd therein; but the Nut itself, in its gross Body, does much more trouble the Stomach, unless it be roasted at the Fire, for then they lose much of their emetick Quality, and only purge downwards; they are given in Clysters with very good Effect to cleanse the Bowels and cure the Cholick; the Kernels, taken in Posset-Drink to a Dram, mollify the Hardness of the Liver and Spleen. The Oil, besides its excellent Use to the Perfumers, is employ'd by the Glovers and Skinners to preserve their Leather from Spots or Stains, or from ever growing mouldy, as those perfum'd with Oil of Almonds do. It more easily extracts, and longer retains the Perfume of any thing infused in it, than any other Oil whatsoever; being dropp'd into the Ears, it helps the Noise in them, and Deafness. The Kernel used with Vinegar and Nitre, is good against the Itch, Leprosy, running Sores, Scabs, Pimples, and other Defecations of the Skin. Mix'd with Meal of *Orobis*, and apply'd plaisterwise to the Side, it helps the Spleen, and eases the Gout, and Nerves which are pain'd with Cramps, Spasms, Colds and Bruises. Mix'd with Honey, it dissolves Nodes, Tophes, Knots, and hard Tumours.

Ben parvum vel Balamus Myrepsica, *Pharagon incolis ad montem Sinai*, or *Lemery*. *Gramum Ben*, the *Ben Berry*; is a Fruit like a Hazel Nut, oblong, triangular, or raised with three Corners, cover'd with a Rind, or thin Scale, pretty tender, and of a grey or white Colour. Within the Bark, or Rind, is a white oily Almond, of a sweetish Taste. The Fruit grows upon

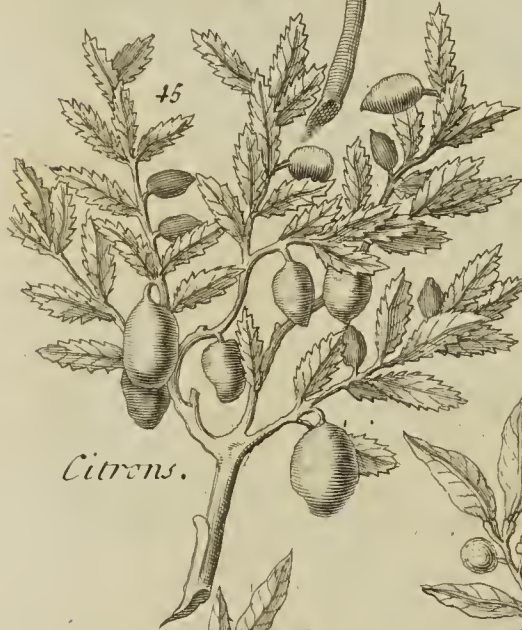
of Fruits .



Almonds .



Citrons



Citrons .



The sweet- or Portugal Orange

48



The Bigarade or large Orange .



Y'scur Orange

China Orange .

Large Indian Pine Nut
in the Husk.



The same out
of Husk.



Common Pine Nut
in of Husk.



of same out of Husk.



a small Pine Kernel



The Barbary Pine
Nut in the Husk



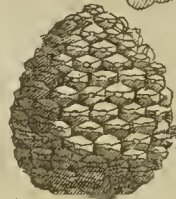
of same out of Husk



The Palma Christi
in of Husk.



of same out.



Pine Apple.

The Ricinus.



A Pistachia Nut.



A Ben Husk.



The Ben Fruit.

Coloquintida.



a branch of of Ben Tree.

upon a certain Tree in *Æthiopia*, resembling the Tamarisk. Chuse such as is new, large, and well fed: There is an Oil made of it, as of Almonds, by Expression, call'd *Oleum Balaninum*, and which has this particular Quality, not to grow rancid with keeping. The *Ben* purges upwards and downwards all bilious and pituitous Humours, given from half a Dram to a Dram and a half: Externally it is deterfivè, resolute, and drying.

Besides this, there is another Species of *Ben*, that is much larger than what I have been speaking of: It is call'd by *Monard*, in his History of Drugs, *Ben magnum, seu Avellana purgatrix*, the great *Ben*, or purging Filbert: It grows in *America*, and is brought sometimes from *St. Domingo*, but is very scarce in *France*: It purges upwards and downwards; the *Indians* use it for the Wind-Cholick, the Dose from half a Dram to a Dram; they weaken its Force by roasting of it.

[The *Ben Nut* is the Fruit of the Tree whose Wood is the *Lignum Nephriticum*, describ'd in the third Book.

The *Avellana Purgatrix* of *America*, which *Lemery* mentions here as another Species of the *Ben Nut*, is the Seed of the *Ricinusides arbor Americana folio multifido*, *Tourn.* mention'd in the last Chapter.]

42. Of Pistachia Nuts.

THE *Pistachia* is a Fruit of the Size and Shape of a green Almond, which we bring from several Parts of *Persia*, and other Places in *Asia*, especially from about a Town call'd *Malover*; the Tree which bears them is much of the Height of a Nut-Tree, and the Leaves almost round; after which come Fruit in Clusters, very beautiful to look upon, being green mix'd with red. Under the Skin, or Husk, is found a hard white Shell, which contains a Kernel of a green mix'd with red on the Outside, and green within; of a sweet pleasant Taste. Chuse your *Pistachias* in the Shell, very heavy and full; in short, such that three Pound Weight of them in the Shell may yield a Pound when broken, that is, a Pound of Kernels.

As to the shell'd *Pistachias*, chuse the newest, that are red without and green within, and the least bruised that can be. As to their Size, some esteem the largest, and others the small, especially the Confectioner, when he is to use them for candying over with Sugar, in order to make what they call *Pistachia Comfits*. They are very little used in Physick, except that they put them into some Galenical Compositions, being a proper Restorative in old Age. They make an Oil of the *Pistachia*, but it is of so little Use, I shall say nothing of it.

Pistachia, Phistachia, Fistici, or the *Pistachia*, is a Fruit of the Shape and Bigness of the green Almond, which is brought from *Persia, Arabia, Syria*, and the *Indies*. They grow in Clusters upon a Kind of Turpentine Tree, call'd *Terebinthus Indica* by *Theophrastus*, or the *Pistachia* of *Dioscorides* by *Tournefort, &c.* and by *Parkinson, Nux Pistacia*. This Tree bears Leaves made like the common Turpentine Tree, but larger, which are fibrous or stringy, and sometimes pointed, ranged severally upon a long Rib, terminated by a single Leaf. The Flowers are disposed in Bunches, in which are fix'd at the Bottom, Chives or Threads, which rise to the Top of the Flower, of a purple Colour; these leave no Fruit behind them, the Fruit growing upon Stalks that bear no Flowers at all.

The *Pistachia* has two Barks, or Rinds; the first is tender, of a greenish Colour, mix'd with red; the second is hard as Wood, white and brittle; they enclose a Kernel, of a green Colour, mix'd with red on the Outside and green within, of a sweet agreeable Taste. They are pectoral, aperive, moistening, restorative, fortify the Stomach, and procure an Appetite. The ripe Nut in Substance is freely and liberally eaten by People of Quality, as well to gratify the Palate, as for physical Uses.

[The *Pistachia Nut* is the Fruit of the *Pistachia Peregrina fructu racemoso, sive Terebinthus Indica Theophrasti, C. B. Pin. 401. Pistachia fructu racemoso, Jonf. Dendr. 128.* It is common in the hot Countries. The Fruit is frequently eaten, but has little Use in Medicine.]

43. Of Almonds.

WE sell two Sorts of Almonds, the sweet and the bitter. The Trees which produce these are so common, I think it needless to give any Description of them, contenting myself only to say that both Sorts of Almonds come from several Parts, as *Provence, Languedoc, Barbary*, and *Chinon* in *Touraine*; but the most valued of all, are those that grow about *Avignon*, because they are usually large, of a high Colour, that is to say, reddish without, and white within, of a sweet pleasant Taste, which is contrary to those of *Chinon* and *Barbary*, that are small and roundish. As to the Use of the sweet Almond, it is so considerable, and so well known throughout the World, it would be needless to mention it. I shall only treat of the Oil, as being a Commodity of great Consequence, considering the vast Consumption that is made of it. There are beside sweet Almonds fold in the Shell, call'd, tho' improperly, *Florence Almonds*, for the

greatest Part of what are sold of them, are brought from *Languedoc* and *Touraine*; the best of these are reckon'd those that break easily under the Thumb. These are of scarce any other Use than to furnish Gentlemens Tables as Part of the *Desert*.

Amygdala or the Almond, is the Fruit *Lemery*. of a Tree call'd in *Latin* *Amygdalus*, or the Almond-Tree, which is cultivated in our Gardens. The Leaves are long, narrow, and ending in a sharp Point, of a bitter grateful Taste; they resemble the Peach Leaves, and are hardly to be distinguish'd from them when pluck'd from the Trees, except that they are tougher or more pliant. The Flower is also very like that of the Peach, but much whiter, and less purgative. It is succeeded by a hard woody Fruit, oblong, cover'd with a hairy greenish Husk that is fleshy. It contains within it an oblong flat Almond, which all the World knows. There are two Kinds of Almonds, the first whereof, or the sweet, are pleasant to eat, of good Nourishment, and proper against Lasks and the Bloody-Flux; they are pectoral and opening, good against Coughs, Cold, Asthma's and Consumptions. An Emulsion or Milk made of them with Barley-Water, is a good Drink in Fevers, Diarrhoeas and Dysenteries. The Virtues of the Oil will be mention'd under that Head.

[The sweet Almond is the Kernel of the Fruit of the *Amygdalus sativa fructu majore*. Boerh. Ind. 2. 245. C. B. Pin. 441. *Amygdalus Dulcis*. J. B. 1. 174.

And the Bitter of the *Amygdalus Amara*. Boerh. Ind. 245. C. B. Pin. 441.

The Sweet make an exceeding pleasant Emulsion, good in all Disorders from acrimonious Humours.

The Bitter are aperient, deterfive, and diuretick, good in Obstructions of the Liver, Spleen, Mesentery and Womb, and are also said to take off the Effects of Drunkenness.

Our present Race of Chymists, as they call themselves, make what they sell under the Name of Black Cherry Water from these, as they give the same Kind of Flavour by Distillation as the Kernel of the Cherry Stone; and they use for this Purpose only the Refuse Almond Cakes, from which the Perfumer has before express'd what he sells under the Name of Oil of *Sweet Almonds*.]

44. Of Oil of sweet Almonds.

Pomet. OIL of sweet Almonds is prepar'd several Ways: Some do it by blanching, and others by pounding them as they are; some use good Almonds, and others bad ones, and every one according to his Capacity and his Conscience; the Method of expressing the Oil is so commonly known, that it wou'd

be trifling to pretend to give any Account of it at this Time of Day; I shall therefore only inform you that there are two Sorts, the one drawn by the Fire, and the other without, which is call'd the cold drawn Oil, and is only proper for internal Use, the hot being subject in a short Time to grow rank and stinking. After the same Manner Oil of bitter Almonds is made, chiefly for external Use; as likewise Oil of Walnuts, Hazel Nuts, Ben, white Pine-Kernels, and of the Ricinus Seeds call'd Oil of the infernal Fig, which is much used by the Savages to kill Vermin; as also from white Poppy Seeds, the four cold Seeds, Linseed, and the like, by Expression, and without Heat. As to the Way of chusing all these Sorts of Oils, the best Advice I can give you is to deal with honest People that are above putting a little Cheat upon you, and not to deal with Hawkers, but give a Price for that which is good in its Kind.

Besides the Oil, there are Mackaroons made by the Confectioners out of the Almonds blanch'd and beat up to a Paste with Sugar, &c. The Almond-Paste which remains after the Expression of the Oil, serves the Perfumers to sell for washing the Hands, and making the Skin smooth. The Oil by Expression new drawn, is good against Roughness and Soreness of the Breast and Stomach, Pleurifies, Coughs, Asthma's, Wheefings, Stitches, hecick Fevers, Ulcers in the Kidneys, Bladder, Womb, and Guts; and helps Scalding of Urine. Oil of bitter Almonds helps Deafness, if dropt into the Ears, as also Pains and Noise therein. Outwardly it takes away Spots in the Skin, and brings down the great Bellies of Children. Oil of bitter Almonds given inwardly with *Manna* and *Sugar-candy* is good against Cholick and Stone, Gripes in Children, dry Coughs, and for Women in Labour. Some say that the Oil of sweet and bitter Almonds both may be preserv'd from being rank by the Help of Spirit of Wine tartariz'd.

[The Oil of sweet *Almonds* is generally more carefully prepar'd than that of the bitter; the *Almonds* are blanch'd, and beat to a Paste in a Marble Mortar, and the Oil press'd out without the least Assistance of Heat.

That of the bitter is generally made from them Skins and all, and they are thoroughly heated before they are put into the Press, and this is commonly sold and used under the Name of Oil of *Sweet Almonds*.]

45. Of Citrons.

Pomet. THE *Citrons*, both the sweet and sour, are Fruit so common, and so well known in most Parts of the World,

World, that I shall pass by their Description, and content myself to say that what we sell comes from *St. Rhemes* about *Genoa*, *Nice*, and *Manton*, a little Village belonging to the Duke of *Savoy* from whence they are brought by Sea and Land to *Marseilles*, *Lyons*, *Rouen* and *Paris*. The Sale of *Citrons* is not made in the Cities aforesaid, except *Nice*, but by the Determination of the Council of the Place, it happens twice a Year, that is to say, in *May* and *September*; sometimes three Times a Year, according as the Crop or Harvest is considerable, and when the Time of the Sale is, they sell only such as will not pass through an Iron Ring made round for that Purpose, all that go through serve to make into Juice, which they transport to *Avignon* and *Lyons*, for the Dyers in Grain. As to the choice of sweet or sour *Citrons*, the Commodity is too well known to need any Description.

46. Of Oil of Citron.

WE sell two Sorts of *Citron Oil*, to wit; the common, and that which is call'd the Essence of *Cedre*. The first and most valued is that which bears the Name of the *Cedre* Essence or *Bergamot*, which is made two Ways, either by the *Zest*, or the rasping or grating of the Citron-peel fresh; with an Alembick and Water they draw this Way a white odoriferous Oil, like the Oil of sweet Almonds, but that it is not so gross and fat. The second Sort is the common Oil of Citrons, which is greenish, clear, and fragrant, and is made by the Alembick, with the Lee or Settling that are found in the Bottom of the Cask, wherein Juice of Citrons has been kept; fifty Pounds whereof will afford three Pounds of clear Oil, more or less, according to the Goodness and Newness of the Citrons. These Oils are used by the Perfumers, because of their agreeable Smell, especially the essential Oil. As to the sour *Cedre*, or *Bergamot*, 'tis a Juice made from a certain Kind of half-ripe Citrons that come from *Bourgaine* near *St. Rhemes*, from whence it is carry'd into several Parts. The Use of it is likewise for the Perfumers, and it is also used by several other Persons.

47. Of candied Citrons.

WE have small *Citrons* brought from the *Madeiras* of different Sizes, candied two sorts of Ways, to wit, dry and liquid. They are very pleasant to eat, and should be chosen tender, green and new. There is besides, the Citron-peel, that comes from the *Madeiras*, candied dry, the best of which is the freshest, in little Pieces,

clear and transparent, very green on the Outside, and the most frosted with the Candy within that can be, very fleshy, easy to cut, and well dried, not full of black Spots, which happens not to it but by Moisture, which it gets by Age.

The Citron-peel is much used, because it is excellent to eat. There is, besides, what we call Chips, that are cut into little Pieces. The *Turks* with the Juice and Sugar make what they call *Sorbec*, the best of which comes from *Alexandria*. With the clarified Juice and fine Sugar we make Syrup of Citron, to cool the Blood, and quench Thirst. The Citron Juice which is made at *Paris*, is not fit for any Thing, being made chiefly of decay'd Citrons.

Citron-peels come also to us from *Spain* and *Portugal*; those which look fresh and of a lively yellow Colour, and that have a fragrant Smell, are best; if the Colour and Smell be decay'd, they are not of much Value. They are cephalick, neurotick, stomachick, cardiack, hysteric, and alexipharmick, good against all cold and moist Diseases of the Head and Nerves, Bitings of Serpents and mad Dogs, and all Sorts of malign and pestilential Diseases; Measles, Small-Pox, Plague, Surfeits, &c.

Under this Head it may not be improper to say something of *Lemons*, which are much of the same Nature. They grow in all the southern Parts of *America*, as also in *Spain*, *Portugal*, *Italy*, and *France*, and with much Care and Housing in the Winter in *England*. The Juice, which is that we intend to speak of here, is sharper than that of Citrons, and therefore dryer and cooler. It is of good Use in Weakness of the Stomach, Vomiting, violent burning Fevers, as also in malignant and pestilential Fevers, and in Diseases of the Kidneys and Bladder. It is also used as a *Menstruum* to dissolve Bodies, and in some Mixtures and Drinks. A Syrup of Lemons for the same Purpose is made with an equal Quantity of Sugar, and thus the Juice is preserv'd; for if it be kept long by itself, it will be apt to grow musty, and lose its Acidity.

Citrum vulgare, as Mr. *Tournefort* calls it, is a little Tree that is always *Levery*, green, whose Branches spread wide, and are pliant, cloath'd with a smooth green Bark. The Leaves are plain, long, and large as the Walnut, pointed like those of the Bay-Tree, but more fleshy, indented on their Sides, of a fine green shining Colour, especially on the outside, and of a strong Flavour. The Flower is made up of five Leaves, round, the Colour white, inclining to red or purple, of a pleasant Smell, supported by a round hard Cup. When the Flower is gone, the Fruit forms itself usually oblong,

oblong, sometimes oval, and sometimes almost round, as thick as a large Pear, cover'd with a rough uneven Rind, fleshy, thick, of a green Colour at the Beginning, but as it ripens it becomes of a light Yellow without, white within, of a very agreeable Smell, and a biting aromatick Taste. This Rind covers a vesiculous Substance, divided into several Cells, or Partitions, full of a Juice that is acid and very pleasant to the Taste, and with some oblong white pithy Seeds, of a Taste that is a little bitter. The Fruit carries the Name of the Tree that bears it, which is the *Citron* Tree, cultivated in the hot Countries, as *Italy*, *Provence* or *Languedoc*; the Fruit is chiefly used in Physick, the Leaf and Flower very rarely.

These two latter, namely the Leaf and Flower, afford abundance of Oil, volatile and essential Salt; they are cordial and strengthen; the Rind, especially the very outward Part that is yellow, yields a good deal of volatile Salt and Oil: It is proper to fortify the Heart, Stomach and Brain, and to resist Poison. The Juice contains in it a Quantity of essential Salt and Flegm, but very little Oil: It is cordial, cooling, proper to abate the Heat of the Blood, to precipitate the Bile, to quench Thirst, and resist Poison. There is a Way of sticking a Citron all over with Cloves, to carry in the Pocket to smell to in any epidemical Sicknes, in order to drive away the Contagion. There is another Kind, call'd the *Sweet Citron*, because not sharp as the other; but in no Esteem either for its Use or Beauty.

[The *Citron* is the Fruit of the *Malus Citria* sive *Medica*. Rai. Hist. 2. 1654. *Citrum vulgare*. Boerh. Ind. Alt. 2. 420. It is cultivated in *Spain* and *Italy*; and the *Lemon* of the *Malus Limonia*. Rai. Hist. 2. 1656. *Malus Limonia acida*. C. B. Pin. 436.

The *Citron* and *Lemon* have much the same Taste and Virtues, but the *Lemon* is the sharper of the two..

48. Of Oranges.

THE sweet and four *Oranges* come from *Nice*, *Afiouta*, the Isles of *Pomet*. *Hyer*, *Genoa*, *Portugal*, the *American* Islands, and *China*; but the largest Store of those we use now come from *Provence*. *Oranges*, as well as *Citrons*, are so well known that I shall make no Description of them,

Oranges are candied whole, after having been scopp'd; and these are what we call *whole Oranges*, or *whole Candied Orange Peel*. The finest is that which is made at *Tours*, because it is clearer, more transparent, and of an higher Colour than

any other. We have *Orange Peel* cut in Chips from *Lyons*, which is what we call *Orangeat*, and cover'd with Sugar is the *Orangeat Confit*.

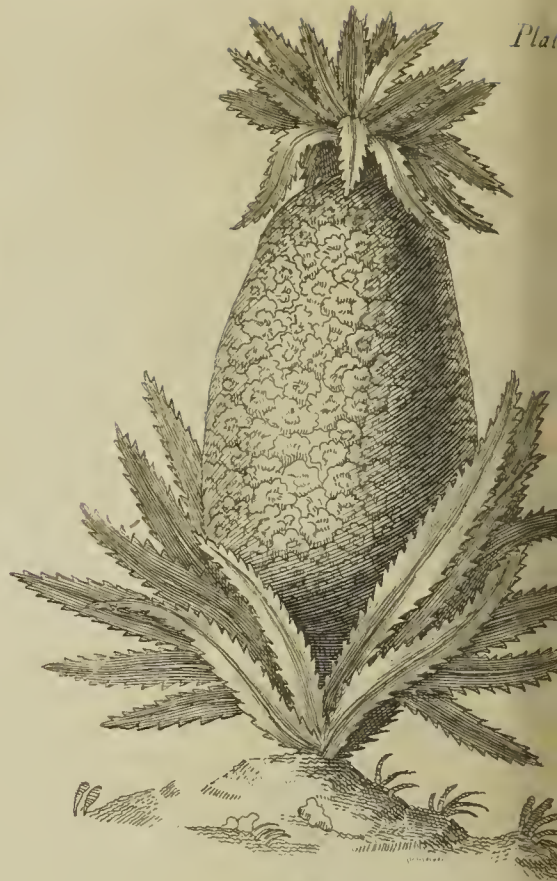
Beside the large Trade we have in the sweet and sour *Oranges*, and the *Bigarrades* or large *Oranges*, we also sell the *candied Orange Flowers*, which come chiefly from *Italy* and *Provence*; and the distill'd Water is what we call *Naptha* and *Orange Flower Water*, which is used by the Perfumers; that which is best ought to be of a sweet Smell, bitter Taste, very pleasant, and of that Year's Distillation; for what is kept above the Year loses its Smell. Those who distil *Orange Flowers* draw also a clear Oil of a strong Fragrancy, which the Perfumers call *Neroli*; the best is made at *Rome*, and the next in *Provence*: This is the common Opinion; but we may assure ourselves it is erroneous, for that it is easy to make better at *Paris* than either in *Italy* or *Provence*; the Reason is, that *Italy* and *Provence* being hotter than our Climate, the Sun more readily exhales the Odour; but we cannot draw the same Quantity of Oil as in the hot Countries, for in *Italy* and *Provence* they may make several more Distillations than we can, because the Flowers that are in Prime one Month in *Paris* hold two in *Provence* and three in *Italy*, because of their greater Nearness to the Sun.

The Difference between *Naptha* and *Orange Fower Water* is, that the *Naptha* is distill'd from the Leaves of the *Orange Flowers*, pick'd clean from the Filaments, &c. and the *Orange Flower Water* from the whole Flower as it is gather'd; the *Naptha Water* therefore, truly prepar'd, is much finer and more fragrant than the common *Orange Flower Water*.

The People of *Provence* bring us an Oil which they make from the *Zests* and the outward thin Rind of the *Oranges*, by means of an Alembick and Water, and this Oil is of a strong sweet Smell. They bring besides another Sort we call *Orangelette Oil*, which is made of the little *Oranges*, which they distil in an Alembick, with a sufficient Quantity of Water, after having infused it five or six Days in the said Water. This Oil is of a golden Yellow and a strong fragrant Smell. The Oils of *Oranges* are excellent Remedies for curing Worms in little Children, and likewise the Water made in drawing the Oil serves for the same Purpose; upon this Account the Perfumers of *Provence* transport a great deal in Bottles and Barrels to several Parts to give to young Children. The greatest Quantities of this Oil are made at *Grave*, *Biot*, three Leagues from *Grave*, and at *Nice*. I ought to inform you, that most of the Oils which come from *Provence* are adulterated or mix'd with Oil of *Ben*, or Sweet Almonds; for



*The Ananas or
King of Fruits.*



51



Dow Wert Cotton.

50



Cotton.

for which Reason they ought not to be bought but of honest People.

Aurantium, Arantium, Aureum malum, Pomum Nerantium vel Anerantium, is a Kind of a fine yellow, sweet scented Apple, that grows upon a Tree call'd in Latin, *Malus Arantia, sive Arangius*; the Leaves are of the Shape of those of the Bay-Tree, but much larger, always green, having a fine white Flower of a fragrant Smell, compos'd usually of five Leaves that stand round, and are supported by a Cup. This Tree is cultivated in all our Gardens, but especially in the warm Countries.

There are generally two Sorts of *Oranges*, one small, yellow, greenish, bitter and sharp; the other large, of a fine golden Colour, and sweet to the Taste: The Bitter is most used in Physick, from the outward Rind of which they make *Zests*, which are endow'd with a great deal of exalted Oil and volatile Salt, which contains almost all the Scent of the Fruit; the Juice is acid, and consequently full of essential Salt. The Rind of the bitter *Orange* is much esteem'd to recreate the Spirits, strengthen the Stomach and Brain, resist the Malignity of Humours, and excite Womens Courses.

The Juice of the bitter *Orange* is cordial, and the Flower cephalick, stomachick, hysteric, and proper against Worms: The other *Orange* contains in it a sweet and pleasant Juice, compos'd of a great deal of Flegm, a little Oil and essential Salt, whereof the Rind likewise partakes in the same Degree: The Fruit is moistening, cordial, cooling, and good to allay Thirst in continual Fevers: The Seed has the same Virtue as that of the *Citron*, but is seldom used in Physick.

Others there are who divide the *Oranges* into three Sorts; the *Crab*, or four *Orange*; the *Bitter*, or *Seville*; and the *China*, or sweet *Orange*; Of all which, the *Seville*, or bitter *Orange*, is of most Virtue, and mostly used in Physick; as the Peel for Confections, the Oil for Perfumers, Juice for Syrups, Flowers for candying, Seed, or Kernel, for Emulsions; and the Water, or Spirit, for a Cordial; in all which Forms they are stomachick, cephalick and anticholick.

[The sweet *Orange* is the Fruit of the *Aurantium Medulla dulci vulgare*. Fer. Hesp. 377.

The Sour, of the *Aurantium acri medulla vulgare*. Fer. Hesp. 377.

The Peel of the second Kind is what is most used in Medicine: It is a very agreeable aromatick Bitter, and gives a very agreeable Flavour to bitter Tinctures and Infusions, in which it is generally made an Ingredient.]

49. Of the Ananas, or Pine-Apple, the King of Fruits.

WE may very justly, according to Father *Du Tertre*, call the *Ananas*, or *Pine-Apple*, the King of Fruits, because it is much the finest and best of all that are upon the Face of the Earth. It is certainly for this Reason that the King of Kings has placed a Crown upon the Head of it, which is as an essential Mark of its Royalty: and at the Fall of the Father it produces a young King, that succeeds in all his admirable Qualities. It is true, there are other young Shoots besides that Bud underneath the Fruit, and at the Bottom of the Stalk, that produce the *Ananas* in less Time, and with the same Ease, with that which makes the Crown; but it is also true, that the Fruit which is produced from this is incomparably much finer than the other.

This Fruit grows upon a round Stalk, the Thickness of two Thumbs, and about a Foot and half high, which grows in the Middle of the Plant, as the Artichoke in the Midst of its Leaves. The Leaves are about three Feet long, four Fingers broad, hollow like small Pipes, bristly on the Edges, with little sharp Prickles, and ending with a sharp Thorn like a Needle. At first the Fruit is not so big as one's Fist; and the Clusters of Leaves, which is the little Crown born upon the Head, is red as Fire; from every Scale or Shell of the Rind of the Fruit, which in Shape, though not in Substance, is very like the *Pine-Apple*, there arises a little purplish Flower, which falls off and withers as the Fruit encreases.

They are distinguish'd into three Sorts, namely, the large white *Ananas*, the *Sugar-Loaf*, and the *Rennet-Apple Ananas*: The first is often eight or ten Inches Diameter, and fifteen or sixteen high; the Flesh is white and fibrous, but the Rind of a golden Yellow; when it is ripe it sends forth a ravishing Smell, which is something like that of the Quince, but much more delicate; but though this Kind is much larger and finer to Appearance than the others, the Taste is not so excellent, neither is it so much esteem'd; it sets the Teeth on Edge, and makes the Gums bleed more than the others.

The second Sort bears the Name of the *Sugar-Loaf* from its Shape and Form, that entirely resembles it: It has Leaves a little longer and narrower than the former, and not so yellowish: The Taste is better than that of the former, but it makes their Gums bleed that eat much of it. I have found in this Kind a Seed like that of the Garden-

Garden Cress ; though it is the general Opinion that the *Ananas* does not feed at all.

The third is the least, but the best, and is called the *Remet* Apple, because of its Taste and Smell, that both have some kind of Resemblance to that Fruit ; it seldom sets the Teeth on Edge, or makes the Mouth bleed, if it is not eat to a great Excess indeed ; this is what each of them has particular, but they all grow after the same Manner, bearing their Tufts of Leaves, or their Crown upon their Head ; their Rind looks like that of the Pine-tree Apple, but separates, and cuts like that of the Melon ; and though the Flesh, like that of all the others, is fibrous, it altogether melts into Water in the Mouth, and is so elegantly tasted, that I know not how to describe its Flavour better than by saying, that it partakes of the Peach, the Apple, the Quince, and the Muscadine Grape, all together.

Some, to take away the Quality of making the Gums bleed, and inflaming the Mouths of such as eat too much of them, or eat them before they are full ripe ; after having pared off the Rind, and cut the Flesh into Slices, they leave it a little while to steep in *Spanish* Wine ; and this not only frees the *Ananas* from this ill Effect, but it communicates to the Wine a most agreeable Taste and Smell. There is a Wine made of the Juice of this Fruit, almost as strong as *Malmsey* ; and which intoxicates full as soon as the best and stoutest Wine in *France*. If you keep this Wine above three Weeks it will seem dead and spoil'd ; but if you will have Patience with it for a little Time longer, it will recover itself perfectly, and be stronger and better than before. When moderately used, it is good to exhilarate the Spirits when oppress'd, and prevent the Nauseatings of the Stomach ; is good to relieve the Suppression of Urine, and is a Counter-Poison for those who have drank of the Juice of the *Yucca* or *Manihot* Root. Women with Child, however, must take Care how they drink the Wine or eat the Fruit in great Quantity, lest it should cause Abortion. We sell at present the preserv'd *Ananas* at *Paris*, brought from the *Indian* Islands, which are very good, especially for aged People to restore the natural Heat, and comfort feeble Spirits.

Ananas, *Nanas*, or *Jayama*, is a very *Lmery*. fine *East-India* Fruit, which grows upon a Plant, and of the Size of the *Artichoke*. This Fruit is adorn'd on the Top with a little Crown, and a Bunch of red Leaves like Fire : The Rind appears with a Shell like the Pine-Apple, but separates like that of the Melon ; the Flesh is fibrous, but dissolves in the Mouth, ha-

ving the delicious Taste of the Peach, the Quince, and the Muscadine Grape, all together.

There are three Sorts, as Mr. *Pomet* has describ'd them from Mr. *Du Tertre* : They make a Wine from the Juice, which is almost equal to *Malmsey* Sack, and will fuddle as soon. It is proper to strengthen the Heart and Stomach against Nauseating, to refresh and recruit the Spirits ; it excites Urine powerfully ; but Women with Child ought to avoid it, because it procures Abortion : They make a Confection of the *Ananas* upon the Spot, which is brought hither whole ; this is good to warm and restore a weak and aged Constitution.

[The *Ananas*, or *Pine-Apple*, is the Fruit of the *Pinea Brasiliiana Ananas dicta*, Hist. Ox. 3. 171. There are a vast many new Species of it found out since the three describ'd by our Author ; but as they have no Use in Medicine, it would be foreign to the Intent of this Work to enter into a Detail of them here.

They have long been produced in the Gardens of the Curious here, and are at present regularly sold as other Fruits of the Production of our own Climate.

The *Yucca* Root they make their Bread of when dry ; but the Juice of it is poisonous.]

50. Of Cotton.

COTTON is a white soft Wooll which is found in a kind of brown *Pomet*. Shell, which grows upon a Shrub in Form of a Bush ; what Father *Du Terre* says of it is as follows : At first, when the Islands were inhabited by the *French*, I saw them, says he, fill their Plantations full of *Cotton* Shrubs, in hopes the *Cotton* would yield them great Profit in Trade ; but most of the Merchants would not meddle with it, because it took up too much Room, and was subject to take Fire, decay and the like.

This Shrub grows in Form of a Bush, and the Branches that stretch wide are well charg'd with Leaves, something less than those of the Sycamore, but almost of the same Shape : It bears a great many fine, yellow, large, Flowers ; the Bottom of the Flower is of a purple Colour, and it is all strip'd on the Inside ; it has an oval Button that appears in the Middle, and grows in Time to the Size of a Pigeon's Egg ; when ripe it becomes black and divides itself into three Parts at Top ; and the *Cotton* or *Down* in it, looks white as Snow : In the Cluster of Down, which swells with the Heat to the Bigness of a Pullet's Egg, there are seven black Seeds, as large as Lupines, sticking together ; their Inside is white, oily, and of a good Taste.

This

This *Cotton* grows in great Quantities in all the Islands, and the Natives take great Care in the cultivating of it, as a Thing very useful for their Bedding : I have observ'd one Thing of the *Cotton* Flower not known to any Authors yet, or at least not taken Notice of ; which is, that the Flowers, wrapp'd up in the Leaves of the same Tree, and bak'd or roasted over a Fire of burning Coals, yield a reddish viscus Oil, that cures in a little Time old standing Ulcers. I have often experienced it with very good Success : The Seed of this Shrub will make the Parroquets fuddled ; but it is beneficially used against Fluxes of Blood and Poisons.

We sell several Sorts of *Cottons*, which only differ according to the Countries from whence they come, and the various Preparations. The first is the *Cotton* in the Wooll, that is to say, that which is as it comes from the Shell, only with the Seeds taken out ; this comes from *Cyprus*, *Smyrna*, &c. The second is the *Cotton* in the Yarn, which comes from *Damascus*, and the *Jerusalem Cottons*, which are called *Bazac*. There are several other Sorts ; as, the *Demi Bazacs*, the *Beledin Cottons*, those of *Gondezel*, *Motafin*, and *Genequin* ; but of all the *Cottons*, we sell scarce any but that of *Jerusalem* and the Islands. The true *Bazac*, or *Jerusalem Cotton*, ought to be white, fine, smooth, the best spun, and most equal, or evenest that can be. As to the *Cotton* in Wooll, the whiter, longer, and sweeter it is, the more valuable it is. Those who buy in whole Bales, ought to take care it be not damag'd with Mould, Mustiness, or wet. *Cotton* has many Uses, too well known to need being related here. As to the black Seed which is found in the *Cotton*, an Oil may be made of it, admirable for taking away Spots and Freckles, and for beautifying the Face ; and which has the same Virtues with Oil of the Cokar Kernels, made after the same Manner by the *Indians*, especially in the Island of *Assumption*, from whence almost all the Cokars we now sell are brought.

Xylon, *Coto*, *Gossipium*, *Cotoneum*, *Lemery*. *Bombyx Officinarum*, or the *Cotton* of the Shops, is a Plant whereof there are two Kinds : The first is called *Xylon sive Gossipium herbaceum*, by *J. Bauhinus*, *Ray* and *Tournefort* ; *Gossipium frutescens annuum*, by *Parkinson* ; and *Gossipium frutescens semine albo*, by *C. Bauhinus* ; which signifies either the Herb *Cotton*, the Annual Shrub *Cotton*, or that with the white Seed : It bears a Stalk of a Foot and a Half, or two Foot high, that is woody, cover'd with a reddish hairy Bark, divided into several short Branches ; the Leaves are a little less than the Sycamore Leaves, shap'd almost like those of the Vine, hanging to

long Stalks, adorn'd with a Nap or Hair ; the Flowets are numerous, fine and large, having the Shape or Form of a Bell, slit or cut into five or six Divisions to the Bottom, of a yellow Colour, mix'd with Red or Purple : When the Flower is fallen, it is succeeded by a Fruit of the Bigness of a Filbert ; which being ripe, opens into three or four Quarters or Partitions ; from whence appears a Flake of *Cotton*, white as Snow, which swells up or tumifies by Heat, to the Size of a little Apple. It contains in it gross Seeds like small Peas, oblong, white, and cottony ; each having in it a little oleaginous Kernel that is sweet to the Taste.

The second Sort is called *Xylon Arboreum*, or the Tree *Cotton*, by *J. Bauhinus*, *Ray* and *Tournefort* ; it differs from the former in Bigness, for this grows into a Tree or Shrub of four or five Foot high. The Leaves approach, in some Measure, to those of the *Linden* Tree, indented deep into three Parts, without Nap or Down : The Flowers and Fruit are like those of the other Kind. The two Species of *Cotton* grow in *Egypt*, *Syria*, *Cyprus*, *Candia*, and the *Indies* : The Flowers are vulnerary ; the Seed pectoral, proper for Asthmas, Coughs, to procure Seed, consolidate Wounds, for Dysenteries, Scourings of the Belly, Spitting of Blood, &c.

[The Shrub which produces the *Cotton*, is the *Gossipium frutescens Annuum*, Park. 1553. *Gossipium frutescens semine nigro*, C. B. Pin. 430. The Seeds are commended by many Authors in various Intentions ; but they are never heard of in the present Practice. The *Cotton* itself is said to do Wonders in the Gout, being burnt upon the Part ; but its Efficacy can be no other than that of Fire, or Quick Lime ; whatever Good attends this Practice being wholly owing to the Burning.

The *Xylon Arboreum* is never heard of in Medicine.]

51. Of *Apocynum*; or Dog's-Bane Cotton.

THE *Huëtte*, or Dog's-Bane *Cotton*, is a Kind of *Cotton* taken from the *Pomet*. Husk of a Plant which the *Botanists* call *Apocynum*, which signifies Dog's-Bane ; which is represented in the same Plate with the *Cotton* ; this grows plentifully near *Alexandria* in *Egypt*, especially in moist and marshy Grounds, from whence we have what is now sold amongst us. This has no other Use than to fur the Robes of Persons of Quality.

Apocynum Ægyptiacum lactescens, siliqua *Asclepiadis* C. Bauhinus, vel *Apo-Lemery*. *cynum Syriacum*, seu *Palestinum*, sive *Ægyptiacum*,
X

Ægyptiacum, the Syrian, Palestine or *Ægyptian* Dog's-Wort; *Apocynum Ægyptiacum floribus spicatis*, *Tournefort*, *Ægyptian* Dog-Wort with Spike Flowers; and by some *Esula Indica*, or the *Indian* Spurge. This is a Plant which grows in the Nature of a little Shrub, with strait Shoots, of about three Foot high, whose Leaves are long, large and thick as those of Alces, set against the Stalks, white and full of the same Liquor with the other Parts of the Plant; to wit, with a white Juice like Milk, that is acrid and bitter. The Flowers grow at the Tops of the Branches in the Nature of an Ear, Bell-fashion'd, indented, and yellow. When the Flowers are gone, a Fruit succeeds as thick as one's Fist, oblong like a large Sheath or Cafe; these hang two and two upon a hard crooked Stalk; the Fruit is call'd, in *Egypt*, *Beidelfax*, and is cover'd with two Rinds or Barks; the first or outermost of which, is a green membranous one; the second resembles a thin Skin that has been dress'd or smoothen'd, of a Saffron Colour. This Rind contains a stringy or fibrous Matter, like the Moss of a Tree, with which all the Fruit is full, in the Nature of a fine Cotton, that is very soft and white, which is call'd *Hoiatte*, or *Hoiette*. They find in this Cotton Seeds made like those of Pumpkins, but less, reddish, full of a whitish Pulp, and of a bitter Taste. The Root is long, strong, surrounded with Fibres; this Plant is beautiful to the Eye. The Stalk and Leaves are cover'd with a sort of Wooll, and are full of Milk. It grows in *Egypt* about *Alexandria*. The Leaves being stamp'd and apply'd as a Cataplasim, are reckon'd proper to resolve cold Tumours. The Juice makes the Hair come off, and is a Remedy for cutaneous Cases used externally: But it is a Poison given inwardly, for it purges with that Sharpness and Violence, that it causes mortal Bloody-Fluxes.

[This Cotton is the Product of the *Apocynum majus Ægyptiacum flore luteo spicato*, Breyn. Prodr. 2. 14. *Beidel-ossar*, et *Beidelfar*, Alp. 36. *Apocynum Ægyptiacum floribus spicatis*. El. Bot. 78. It is cultivated in the Gardens of the Curious, and flowers in *August*. The Leaves are a Poison to Dogs, Wolves, and other Animals.

The *Pseudo Ipecacuana fusca*, a poisonous Root, brought out of a *America* for the true *Ipecacuana*, and sometimes unhappily used as such, is the Root of another Species of this Plant, the *Apocynum Erectum Salicis latiori folio umbellatum floribus Aurantiis*, Pluk. Alm. 36. *Apocynum Canadense angustifolium flore Aurantio*, Hort. Bleff. 232.]

52. Of Olives.

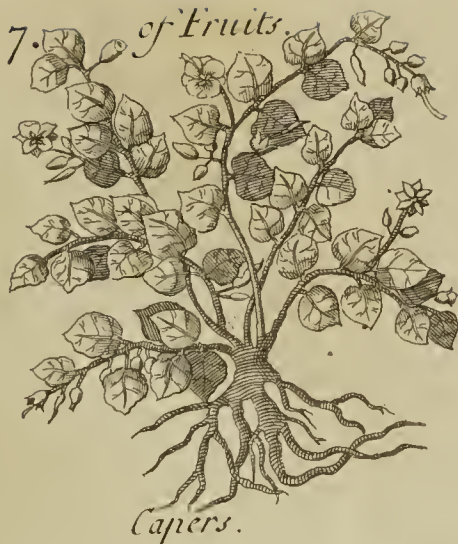
WE sell at *Paris* three Sorts of *Olives*, which do not differ but *Pomet.* in Size, and according to the Country from whence they come. Those of *Verona* are most valued, of which there are three Kinds. The next in Goodness are the *Spanish Olives*; and the third Sort are the *Provence Olives*, which are called the *Picholine*, or the *Pauline*, and very improperly *Lucca Olives*; for they are not brought from thence.

The Tree that bears the *Olives* is usually small, as may be seen by the Cut of it. As to the Leaves, they are thick and green, the Flowers white, and the Fruit green at the Beginning, but reddish when ripe. I shall not take up your Time to describe the several Works that are made of the *Olive* Wood, but content myself only to speak of the Oil that is made from the *Olives*, and the Manner in which they pickle them for eating.

As soon as the Peasants see that the *Olives* are ready to be gather'd for keeping, which is about *June* and *July*, they gather them, and carry them to Market as the Country People with us do Cherries. Those who would preserve or pickle them, throw them into fresh Water, and after they have lain there some Time, they take them out, and put them in Brine, which they have made with Potashes, and the Ashes of burnt *Olive* Stones, or Lime; and after they have remain'd there a sufficient Time, they barrel them up, according to what Size best fits them, with a Brine or Pickle of Salt and Water, upon which is thrown a little Essence or Tincture, made of Cloves, Cinnamon, Coriander, Fennel, and other Aromatics. And the whole Knowledge of managing these *Olives* depends upon understanding this Mixture, which they keep as a Secret amongst them.

Chuse your *Olives*, especially the *Verona*, new, right or true, firm, and well cover'd with Pickle; for as soon as the Brine or Pickle leaves them, they grow soft and black, and, in a Word, good for nothing; which is of some Consequence, because they are a pretty dear Fruit. For the *Spanish Olives*, they are as big as a Pigeon's Egg, of a pale Green, and bitter Taste, which does not please every Body; but for the *Provence*, especially the *Picholine Olives*, they are reckon'd the best, because it is pretended that Messieurs *Picholini*, of *St. Cheme's*, knew how to pickle them better than other People, which is perhaps no Mistake; since those are the finest and best *Olives*, as they are much greener, and of a better Taste than the *Pauline*, and other *Olives* of *Provence*. They are

Book 7. of Fruits.



of delicate Nutriment, stomachick, pectoral, antiscorbutick, gently loosen the Belly, and are chiefly used in eating.

Olea oncus, the *Olive-Tree*, is of a *Lemery*. moderate Bulk or Size, whereof there are two Sorts, one cultivated, and the other wild. The first is called *Olea Sativa*, by *Dod*, both the *Baubines*, *Ray*, and *Tournefort*, the planted or cultivated *Olive*, whose Trunk is knotty, the Bark smooth, of an Ash Colour, the the Wood pretty solid, of a yellowish Colour, the Taste a little bitter; the Leaves are longish and narrow, almost like the Willow, pointed, thick, fleshy, oily, hard, and of a pale Green without, and whitish underneath, but without Hair or Down, hanging by short Stalks opposite to one another. There arise betwixt the Leaves, Flowers disposed in white Bunches, that are supported upon Stalks, consisting each of a single Leaf, slit in four Parts, that grows narrower, or contracts itself at the Bottom into a Pipe. When the Flower is gone, there follows an oblong or oval Fruit, green, fleshy, succulent, which is called *Oliva*, or the *Olive*. This is less or bigger, according to the Place where it grows. That which grows in *Provence* and *Languedoc* is as big as an Acorn; that which *Spain* produces is larger than a Nutmeg: Both Sorts have a little acrid bitter Taste, and contain under the fleshy Part an oblong stony Nut, which has a Kernel enclosed within it. This Tree is cultivated in *Spain*, *Italy*, *Languedoc*, and *Provence*.

The wild Olive is call'd *Olea Sylvestris*, by *Gerard* and *Ray*; or by *Tournefort*, and others, *Olea sylvestris folio duro subtus ineano*. It differs from the former in that it is much less in all its Parts, and that the Leaves are much whiter underneath. They grow likewise in the hot Countries, and they pickle them up with Salt and Water to make them fit for eating; for as they are taken from the Trees, they have an unsufferable Taste. They likewise make Oil Olive from them by Expression, as may be seen in *Lemery's Universal Pharmacopœia*. This Oil is emollient, anodyne, resolutive, deterfive, proper for Bloody Fluxes, and the Cholick. The *Olives* abound with a great deal of Flegm and essential Salt, which they lose in being squeez'd, or passing through the Press; the Leaves are astringent. The *Olive Branch* was always the Emblem of Peace, as the Laurel is of Glory. There are certain wild *Olives* that grow near the Red Sea, that throw forth a Gum very proper to stop Blood, and cure Wounds.

[The *Olive* is the Fruit of the *Olea sativa* of most Authors; it is common in the hot Countries, and flowers in *June*. The pickled Fruit is much

eaten, but is apt to pall and relax the Stomach too much.

The wild *Ol've* is the *Oleaster five Olea Sylvestris*. Park. 1438. *Olea Sylvestris*. Ger. 1206.

And the Kind mention'd by *Lemery* as growing near the Red Sea, and affording a Gum proper to stop Blood and heal Wounds, is the *Gum Elemi-Tree*, as will be seen in its proper Place.]

53. Of Oil Olive.

Besides the *Olives*, we have a considerable Trade in the Oil, which is *Pomci*. so necessary to Life, that we may bring it in Competition with Bread and Wine. The Way of making *Oil Olive* is little different from that of *Almonds*, since there is nothing else necessary towards the making of good Oil, than after the gathering of the *Olives*, when they begin to redden, that is to say, when they are full ripe, which is in *December* and *January*, to press them in Mills made for that Purpose. The Oil which they produce is sweet, and of a pleasant Taste and Smell; and this Oil is what we call *Virgin Oil*, the most valuable of which is that of *Grasse*, *Aramont*, *Aix*, *Nice*, and some other Places. But as the new gather'd *Olives* do not yield the Quantity of Oil which those do which lie some Time upon the Floor, those who wou'd have a great deal of Oil, leave the *Olives* to rot, and afterwards press them; but the Oil which they produce is of an unpleasant Taste and Smell. Some also, to make them yield the more, throw boiling Water upon what remain'd of the first Pressing, which they squeeze over again; and this Oil, made thus, is what we call *Common Oil*, not varying in Goodness, but according to the Places from whence it comes. The best *Common Oils* come from *Genoa*, *Onelle*, and other Parts of *Italy* and *Provence*; and the worst comes from *Spain*, but especially from *Majorca* and *Portugal*.

The Choice of Oil is so well known to all the World, it wou'd be useless to insist upon it. And *Oil Olive* is so much used, that we have no Sort of Commodity whereof we make a greater Consumption, in that few can be without it; beside that it is of Use in Medicine, as being the Basis of all compound Oils, Cerecloths, Balsams, Ointments and Plaisters. Besides the other great Qualities that are in *Oil Olive*, I shall not stop to say, that it is a natural Balsam for the Cure of Wounds, being beat up with Wine; and it is of Wine and this Oil, that the *Samaritan Balsam*, with which the *Good Samaritan* in the Gospel, heal'd the Wounds of the Traveller, is made, which is a Medicine in Use at this Day, as well with the Rich as the Poor. *Oil Olive* is

also useful for burning, especially in Churches and the like, because it does not stink so bad as other Oils, besides that it lasts longer; but its Dearness makes it that the Poor cannot use it. We likewise have a considerable Trade in *Nut-Oil*, which we have brought us from *Burgundy*, *Touraine* or *Orleans*, which bears a Price, because it is much used by Painters, and other Workmen, as Printers, Rolling-Press Workers, and the like; besides that a great many use it for the Cure of Wounds, as being a natural Balm. As to its Use for burning, it is a very ill Practice, because it is quickly consum'd, and is reduced to a Coal. We also have considerable Dealings in Oil of Rapes, which we have from Flanders, and a common Sort from *Champagne* and *Normandy*. So likewise we have Oil of Hempseed, Camomile and Linseed from *Flanders* and other Parts, especially when Train or Whale Oil is dear. Besides the ripe or compleat Oil of Olives, which is, as I have said, what is press'd out of ripe Olives, and is brought to us frequently from *Florence* as well as from *Genoa*, there is the Oil *Omphacine* press'd out of unripe Olives, for which Reason it is cooling, drying, and binding, used in several Compositions for strengthening the Stomach, healing Exulcerations, cooling the Heat of Inflammations, and reperculsing Tumours in their Beginning; hereof is made Oil of Roses, *Omphacine* and Oil of Quinces. The Oil of ripe Olives heats and moistens moderately, whereof the old mollifies more than the new, but the last is best for internal Uses, and loosens the Belly, taken in warm Ale, or the like, to an Ounce. It corrects the Dryness or Huskiness of the Breast, and allays the Pains of the Belly, relaxes the Ureters, cleanses and heals them. It is used with warm Water to provoke vomiting, and cleanse the Stomach. A Linctus is made of it with Syrup of Violets against Hoarseness, Shortness of Breath, and to open Obstructions of the Breast or urinary Passages. It is used in Clysters to loosen the Belly, and mollify the harden'd Excrements. The distill'd *Oil Olive* is that which is call'd Oil of Bricks, which is a subtil and piercing Oil, and of great Virtues, but not much used, because it stinks so egregiously, though good in both Gout and Palsy.

[*Olive Oil* is an excellent Ingredient in Ointments and Cataplasms, intended as Ripeners, in which it acts by relaxing the swell'd Part: But it is little used inwardly, because of the greater Sweetness and Excellency of the Oil of Almonds.]

54. Of Soap.

BESIDES the great Consumption made of Oil Olive for Works in which it is necessary, for different Foods and for Physick, it is the Basis of several Sorts of Soap which we sell; I mean of the best Sorts, the most valuable of which is the *Alicant Soap*; the next the *Carthagena*; the third is the true *Marseilles Soap*; the fourth that of *Gayette*; the fifth the *Toulon Soap*, which we falsely call *Genoa Soap*. All these Soaps are Compositions of Oil Olive, Starch, Lime-Water, and a *Lixivium*, or Lye of Pot-Ashes, mix'd all together by boiling into a Paste, which is made into Balls or Cakes, in the Form and Figure as they are brought to us. As to the Mixture of their Green and Vermillion I shall say nothing, it being a Secret the Soapboilers keep among themselves; nevertheless I have been assur'd that they use Red Oker, Copperas, and the *Caput Mortuum* of Vitriol, call'd *Colcothar*; but as I am not certain, I shall say nothing further of it.

The Choice of Soap is to have it dry, well marbled or stain'd, and true from the Place whence it derives its Name: that is to say, that such as is sold for *Alicant*, be true *Alicant*, and so of the rest. The *Toulon Soap* shou'd be dry, of a white, tending to a little bluish Colour, cut even, glossy, and of a good Smell, and the least fat or oily that can be. As to the marbled Sort, that which is of a red Vein on the Side, and of a fine Green and Vermillion within, is most esteem'd, because it is best mark'd, of most Use, and the best Sale. As to the Virtues of Soap, they are well enough known; but as few will imagine it is of any great Use in Medicine, I must nevertheless declare, that it is used with Success in the Cure of cold Humours, being dissolv'd in Spirit of Wine; and there is a Plaster compos'd of it, call'd the *Soap Plaster*, which has very great Virtues, as many Authors do affirm. Besides the Sorts of Soap that I have been speaking of, there is a Kind made at *Roüen*, which is made with a certain Grease that is found upon the Kettles and Pots of the boiling Cooks; but as this is a very bad Soap, I shall say no more of it. We sell a liquid or soft Soap, which we call *Black Soap*, made at *Abbeville* and *Amiens*, of the Remains of burnt Oil; but as this Soap is of a brown Colour, there comes from *Holland* a Sort something like it, but green, because instead of the burnt Oil they make Use of Hemp-Oil, which is green. The *Black Abbeville Soap*, which we sell in little Barrels, is much in Use amongst the Cap-Makers, and several other Workmen or Artificers. The green, liquid, or soft

soft Soap from *Holland*, is used by several to rub on the Soles of the Feet of such as are in Fevers, and is said to be a Cure; the Use of this ought not to be entirely rejected, since I have known Persons who have been cured by it. But as this Soap is very scarce in *France*, since none comes there in Time of War, they must content themselves with that of *Abbeville*.

[The Kinds of Soap we have in Use in *England* are,

1. The *Common Soap*, which is made of coarse Oil, Sewet, and a Lixivium of Pot-Ashes, of each an equal Quantity, boil'd to the Consistence we see it of.

2. *Black Soap*, which is made by adding Soot to the former Composition.

3. *Castile Soap*; this is made like the common Soap, only a better Oil is used, and it is boil'd to a higher Consistence and better mix'd; this is colour'd in Streaks with Indigo. And

4. *Venice Soap*, which is altogether white, something softer than the *Castile Soap*, and made of the best Oil of any of the four.

All of them are Diureticks and Deobstruents; the properest for internal Use are the *Venice* and *Castile*.

55. Of Capers.

Pomet. CAPERS are Buds of Flowers which grow upon a Plant that is a Shrub, about *Toulon* and other Parts of *Provence*, from whence come almost all the *Capers* we now sell. They likewise come from *Majorca*, as you will find hereafter.

We sell several Sorts, that scarce differ but as to their Size, and not from the several Countries from whence they take their Name; for 'tis a certain Truth, that all the *Capers* eaten in *Europe*, except those of *Majorca*, come from *Toulon*; so that instead of being call'd *Nice* or *Genoa Capers*, as they always have been, they ought to be call'd *Toulon* or *French Capers*. When they are ready to be gather'd, it ought to be done in four and twenty Hours; for if they are not gather'd exactly during the Time of budding, they open themselves, and are neither proper for pickling or making Vinegar: When the Peasants have gather'd their *Capers*, before they pickle 'em, they run 'em through Sieves whose Holes are of different Sizes, by which Means they have *Capers* of several Sorts, which nevertheless come from the same Plant. The lesser *Capers*, and such as have their Stalks on, are the most valued. As to the *Majorca Capers*, they are little salted ones, whereof there is some Sale in Times of Peace. At *Lions* they eat another Sort of flat *Capers*, with a

rank salt Taste; yet this Sort being seldom or never demanded, we sell but very few of them; but much more of two other Sorts of Flowers pickled in Vinegar, one whereof is call'd *Monks Hood*, and the other *Broom*, or *Broom Buds*; which Plants are so well known, they need no Description.

Capparis spinosa fructu minore, folio rotundo; the Round leav'd Caper with Lemery. the less prickly Fruit. This is a little Shrub, furnish'd with crooked Prickles; the Branches are bending, the Leaves round, and something bitter to the Taste. It bears Sprigs, or little distinct Stalks, carrying on their Tops small Heads, or green Buds, which are gather'd when at their full Growth, before they are blown, to pickle for preserving: When the Bud is full blown, there appear four white Leaves like a Rose, supported on a Cup likewise of four Leaves, in the Middle of which rises a Spire that ends in a Bud. When the Flower is gone, this Bud, according to M. *Tournefort*, produces a Fruit whose Shape resembles that of a Pear, which encloses in its Pulp several small Seeds, lodg'd each in a small Nich or Corner. The Roots are long and thick, from whence the Rind is separated to dry; it ought to be thick, hard, whitish, difficult to break, and of a biting Taste. The *Caper-Tree*, or Shrub, is cultivated in *Provence*, especially about *Toulon*.

There is another Species or Kind of *Caper*; which differs from that we have been speaking of, in that it is not prickly, and that the Fruit is larger. It is call'd by *Casp. Baubinus*, *Capparis non Spinosa fructu majore*; the Caper without Prickles, with the larger Fruit. This grows in *Arabia*, of the Height of a Tree, and retains its Leaves all Winter. The *Caper*, and the Bark thereof, are both used in Physick, and yield a great deal of essential Salt and Oil. They excite or promote an Appetite, strengthen the Stomach, are aperitive, and particularly serviceable in Diseases of the Spleen. The Bark of the Root is very aperitive, and proper to open Obstructions of the Spleen and other Viscera, to dissipate Melancholy, and resist Poison. The Pickle is used as Sauce with Meat, and is made of Vinegar, Salt-Water, and a proportionable Quantity of Spirit of Wine, which preserves the Pickle and the Things pickled.

[*Capers* are the Flower-Buds of the *Capparis Rotundiore folio*. Ger. 748: *Capparis spinosa folio rotundo*. Park. 1023. The Bark of the Root is used in Medicine as an Aperient.

The Buds, preserv'd in Pickle, are eaten as a Sauce; they are gather'd for this Use just before the Time of their opening into Flowers, and laid

in the Shade for three or four Hours, 'till they begin to wither, that they may not open; they are then put into a Vessel and cover'd with Vinegar, in which they are suffer'd to lie eight Days; that is then pour'd off and fresh Vinegar put on, and left for eight Days more; that is then pour'd off and they are put into Barrels with fresh Vinegar, and kept for Use.]

56. Of Bay-Berries.

Pomet. **B**AY-Berries are Fruit of the Bigness of one's little Finger's End, green at the Beginning, and which grow browner as they ripen: These Berries are as well known as the Tree that bears them, of which it wou'd be needless to give a Description; I shall therefore only observe, that they ought to be chosen fresh, well dried, the best fed, and the blackest that can be; take this Precaution, that they be not worm-eaten, to which they are very subject.

These Berries are of some Use in Physick, but more considerably with the Dyers and the Farriers. They are much used in *Languedoc*, where an Oil is made from them, as I shall shew in the next Chapter; and though they grow plentifully in several Places of the *Streights*, yet they are brought to us from *Port O Port*, of a blackish brown Colour, having a Kind of hot oleaginous Taste. They are cephalick, neurotick, alexipharmick, and anticolick; they mollify, discuss, expel Wind, open Obstructions, provoke Urine and the Terms, facilitate the Travel of Women in Labour, and help Crudities in the Stomach. They are good for the Nerves in Convulsions and Palsies, give Ease in the most extreme Cholicks, and take away the After-Pains of Women in Child-Bed; they are used in Powder, Decoctions, Tincture, Spirit, Electuary, Plaister, and Oil; the last of which is made by Distillation, which discusses Wind, cures the Cholick, Cramps, Convulsions, Palsies, Pains, old Aches, Gout, Lameness, Numbness, Sciatica. Dose inwardly, from four Drops to six; outwardly, a Drop or two put into the Ear, helps the Hearing. It is also excellent for Diseases of the Skin; as Dandriff, Morpew, sore Heads, Scabs, &c.

Laurus, or *Laurus Vulgaris*, the Bay, *Lemery.* is a Tree which grows usually of a moderate Height in temperate Climates, but which rises higher in the hot Countries, as in *Italy*, *Spain*, &c. The Stem is smooth without Knots; the Bark something thick, the Wood porous and easy to break; it bears long Branches, and its Leaves are the Length of one's Hand, two

or three Fingers broad, pointed, hard, always green, a little succulent, stringy, smooth, and fragrant, of an acrid, aromack Taste, and a little bitter, tied by short Stalks; the Flowers are each of a single Leaf cut into four or five Parts, of a white or yellowish Colour, succeeded by Berries of the Bigness of a small Cherry, oblong, green at first, but brown as they grow riper. These Berries are odoriferous, aromack, oily and bitter; the Roots thick and uneven; the Tree grows in hot dry Places, and is cultivated in Gardens; the Leaves are useful in Medicine, and yield a good deal of Oil and volatile Salt.

[Bay Berries are the Fruit of the *Laurus vulgaris*. C. B. Pin. 460. *Laurus domestica tenuifolia*. Jons. Dendr. 229. It is common in Gardens, and flowers in April.

There is another Species of this Tree mention'd in some Catalogues of Officinal Trees, and there call'd the *Laurus latifolia*; which is the *Laurus latifolia platytera Dioscoridis* C. B. Pin. 460. *Laurus major sive latifolia*. Park. 1486. The Leaves of this are more fragrant than those of the common Kind, and have been given in Powder to cure Agues.

The Berries of this are not used in Medicine; the Berries of the common Bay are carminative and discutient; their principal Use is in Clysters.]

57. Of Oil of Bays.

THE Oil of Bays, or *Olium Laurinum*, is an Oil made of the Bay-Berries, by bruising them and boiling them in Water; when it is cold it is barrel'd up to be transported to several Places. That which is mostly sold in *France*, is brought from *Provence* and *Languedoc*, especially from a Place call'd *Calvisson*, near *Montpellier*, from whence we have the best; for that of *Provence* is nothing else but Fat and Turpentine colour'd with Verditer or Nightshade Juice; therefore use none but that from *Languedoc*, as being the best of all, when it has all its requisite Qualities, which are to be new, well scented, granulated, and of a green Colour, tending something towards a yellow; and meddle not with that which is green, smooth, liquid, and of another Smell than the Bay, such as that of *Provence*, or what is made at *Lyons*, *Roüen*, or *Paris*, by knavish People, who have no Conscience, but wou'd impose their Rubbish upon the World for a good Commodity. Such are those who counterfeit and sell Rosin for Scammony, Arcanson for Gum Guajacum, fat Pitch for Benjamin, and Kitchen-Stuff discolour'd with green for Oil of Bays, Turmeric for Saffron-

Saffron-Powder, and Honey boil'd up with a Hodge-Podge of powder'd Roots for Treacle; and in a Word, all Sorts of Drugs sophisticated to deceive the Publick, and to make a better Advantage than their Fellow-traders; which is a Thing I fear too much practis'd all over *Europe* as well as in *France*.

[The Method of making this Oil is thus: Gather the *Berries* when ripe, and bruise them in a Marble Mortar, boil them in as much Water as will keep them from burning, and after half an Hour's boiling, put them into a Press; when all is squeez'd out that will run, take out what is left in the Bag, and beat it, and boil it again with more Water, then press as before.

The Oil will be found swimming on the Water pressed out, and must be taken off with a Spoon, and kept for Use.]

58. Of Damascus Raisins.

Pomet. **T**HE *Raisins* call'd the *Damascus Raisins*, are flat, of the Length and Thickness of one's Thumb's End; we have them brought from *Damascus*, the Capital of *Syria*, in roundish Boxes. Chuse the newest, largest, and best fed, and beware they are not *Calabrian Raisins*, as it happens but too often with several Grocers, who make no Difficulty to sell the one for the other, or Jubes flat-ter, and put up on Purpose in *Damascus Raisin Boxes*, which are nevertheless easy to be distinguish'd, because the *Damascus Raisins* are thick, large, fleshy, dry and firm, and have commonly two Kernels; they also are of a faint disagreeable Taste, which those of the *Calabrian Kind* are not, but are of a fat, soft, and sweet sugary Taste, as are also the *Jube Raisins*.

The *Damascus Raisins* are much used in Pectoral Ptisans, and Decoctions, and are frequently join'd with Jujubs, Sebestens and Dates; likewise in Syrup of Marsh-Mallows, in the healing Lohoch, Lenitive Electuary, Confection of Hammech, and in the Electuary of Fleawort. *Raisins* are nothing else but Grapes dipp'd several Times in boiling Water, and dry'd in the Sun. *Damascus Raisins* are most approv'd of; but we commonly use those that are prepared at *Narbon* in *France*, and out of which there is a strong Spirit extracted, or a good Sort of Brandy; they are endued with much the same Properties as Figs. Take *Raisins* of the Sun half a Pound, boil them in a sufficient Quantity of generous Wine, pulp them through a Hair Sieve, and add two Ounces of Hyssop in Powder, of the cooling Species, or Powder of Pearls one Ounce, and make an Elec-

tuary, to be taken to the Quantity of two Drams, in an Asthma.

[The *Damascus Raisins* are the Fruit of the *Vetis Damascena*. Hort. Reg. Par. 186, Tourn. Inst. 613. They are the largest, fleshyest, and firmest *Raisins* we know of, and are the properest of all others to be used in Pectoral Decoctions.]

59. Of Currans.

THE *Raisins* of *Corinth*, or *Currans*, are little *Raisins*, or *Grapes*, of *Pomet*. different Colours, being Black, Red and White, and commonly the Size of the red Gooseberry: The Vine that bears this is low, furnish'd with thick Leaves very much indented, and grows plentifully in a vast spacious Plain that is situated behind the Fortrefs of *Zant* in *Greece*. This Plain is surrounded with Mountains and Hills, and is divided into two Vineyards, in which are abundance of Cypresses, Olives, and Houses of Pleasure, which make, together with the Fortrefs and the Mount *Disceppo*, a Prospect perfectly beautiful.

When these little *Raisins* are ripe, which is in *August*, the People of *Zant* gather and stone them, then spread them upon the Ground to dry, and when dry'd carry them into the Town, where they are thrown through a Hole into great Magazines, call'd *Seraglios*; where they are queez'd so close by their Weight, that those who own them are oblig'd to use Iron Instruments to pull them out, and when they are pull'd out they put them into Casks, or Bales, of different Bigness; and to make them so tight as they are brought to us, they employ Men to tread them with their Feet, which they rub well with Oil beforehand.

Sometimes also we have these *Raisins* from *Natolia*, *Lepanto*, *Messalongi* and *Patras*, as well as *Corinth*, from whence they take their Name: The *English* have a Factory at *Zant*, govern'd by a Consul and six Merchants, to carry on their Commerce, which brings in no small Advantage, for they consume more *Currans* in a Year than all the rest of *Europe*. The *Dutch* have a Consul and two Merchants, and the *French* a Commissary that does the Duty of the Consul and Merchants under one. The People of *Zant* believe to this Day that the *Europeans* use these *Raisins* to dye Cloths, not knowing that they are for eating.

The Fruit is so common upon the Spot, that they sell not for above three Livres a hundred Weight; but they pay as much also to the *Venetians* for Leave to export them; so that at *Mar-seilles* they are not sold under nine or ten Livres, according to the Crop and Hazard of the Sea; the

the *English* and *Dutch*, when the Seas are free, bring them plentifully from thence to *Bordeaux*, *Rochelle*, *Nantes* and *Rouen*, where we buy them at an easier Price than at *Marseilles*. Chuse such as are the newest and freshest, small and in a close Mass, unpick'd and not rubb'd over with Honey. They open Obstructions, and nourish much, being of excellent Use to restore in Consumptions and Heeticks; they are good in Coughs, Colds, or Asthmas, either in Decoction, Honey, Syrup or Conserve.

Vitis Vinifera, the Wine-bearing *Lemery*. Vine, is a Shrub whose Stem, or Stalk, is winding or crooked, cover'd with a cracking Bark, reddish, bearing several long Shoots, furnish'd with Wires, that creep and cling to the neighbouring Trees or Props. The Leaves are large, fair, broad, almost round, jagged and cut in, green, shining, and a little rough to the Touch. The Flowers are little, composed usually of five Leaves each, disposed round, of a yellowish Colour, and fragrant. The Fruit are round or oval Berries, pressing close one against the other in a thick Bunch, green and sharp at the Beginning, but in ripening they become of a white, red or black Colour; and are fleshy, full of a sweet agreeable Juice. They are call'd in *Latin*, *Uvæ*, and in *French*, *Raisins*, as we now call them when dry.

When in Spring Time they cut the Tops of the Vines there naturally distills, or drops, a Liquor in Tear, call'd *the bleeding of the Vine*, and in *Latin*, *Aqua Vitis*: which is aperitive, detensive, proper for the Stone and Gravel, being taken inwardly: The Eyes are likewise wash'd with it to clear the Sight.

The Vine Buds, tender Leaves and Clingers, which they call in *Latin*, *Pampini seu Capreoli*, are astringent, cooling, proper for the Flux of the Belly and Hemorrhages, being taken in Decoction; they are likewise made into Fomentations for the Legs, and to procure Rest. The Shoots and Wood of the Vine are aperitive, being made into a Decoction. The *Raisins*, while green, are call'd in *Latin*, *Agrestæ*, being astringent, cooling, and provoking to an Appetite: when ripe they quicken the Stomach, loosen the Belly, and when press'd become Must, which is afterwards made into Wine.

Raisins are either dried in the Sun or before the Fire, to deprive them of their Flegm, and make them capable of keeping; they are call'd *Uvæ Passæ*, *seu Passulæ*, or dry'd *Raisins*. There are several Sorts, all prepared after the same Manner as the large, which are call'd *Uvæ Damascenæ*, or *Damask Raisins*, and the small call'd *Uvæ Corinthiæ*, the *Corinthian* Grapes, or *Currans*:

They are all proper to sweeten the Asperity of the Breast and Lungs, to soften the Bowels and relax the Belly, and to promote Expectoration, being cleansed from their Stones, which are astringent.

The Husk, or Skin of the Grape, which remains after the last Expression, from whence they draw the Must, is call'd in *Latin*, *Vinatea*: They throw this on Heaps, to the End that it may ferment and grow hot; then they wrap it round the Member or the whole Body of the Patient afflicted with the Rheumatism, Palsy, or Hypogout, to make him sweat, and to strengthen the Nerves; but it sometimes raises the Vertigo, by Means of the sulphureous Spirit that ascends to the Brain.

[The *Damascus Raisins* were spoke of in the last Chapter, and the *Currans*, or *Corinthian Raisins*, are the Fruit of the *Vitis Corinthiaca seu Apyrena*. J. B. 2. 72. Boerh. Ind. Alt. 2. 232. They are not much used in Medicine, unless sometimes in Broths and Gruels, to ease and relax the Bowels.]

60. Of Jube Raisins.

THE *Jube Raisins* are a Kind which we have brought from *Provence*, especially from *Roquevarre* and *Ouriol*: When the Grapes are ripe they gather the Bunches, dip them in Lye made hot, and afterwards put them upon Hurdles, and the like, to dry in the Sun, turning them from one Side to the other, by which Means they dry equally; and when they are dry they put them up in little Chests of white Wood, such as they are brought over in: To answer the Quality requir'd, they ought to be new, dry, in fine Bunches; that is to say, the least fat and stony that may be, but clear and bright, of a sweet Sugar Taste.

There are other Sorts of *Raisins*, which we call *Picardans*, which are much less, drier, and skinnier: In a Word, worse than the *Jubes*. We sell great Quantities of *Calabrian Raisins*, which are fat and of a very good Taste: As also the *Maroquins*, which are black *Raisins*; the *Raisins* of the Sun which come from *Spain*, which are those whereof they make their *Spanish Wine*; these are dry'd red and bluish, and of a very good Taste. The *Spanish Raisins*, of the lesser Sort, are something larger than those of *Corinth*.

Beside the *Raisins*, there is a very great Trade in the different Wines; as those of *Spain*, *Alicant*, *St. Laurence*, *Frontignan*, *Hermitage*, *Burbatume* or *Languedoc*, and several others; and as great in Brandy, which we have from *Cognac*, *Blois*, *Saumur*, and other Parts; besides which, there

there are several other Kinds of Brandy, made from Beer, Cyder, Fruits, Sugar, Corn, &c. but as they do not properly relate to this Head I shall pass them by.

The Use of Brandy is so common at this Time we have no Occasion to enter into a Detail of it any further than as it relates to Medicine, in which it is used to strengthen the Nerves, abate Pain, refresh the Spirits, and dispose the Parts to Perspiration. We make from Brandy, by an Alembick, a spirituous Liquor that is clear and transparent, call'd Spirit of Wine; which, if good and true, ought to be white, and, when set on fire, to burn off without any Moisture remaining. The best Way to know whether it is truly de-flegmated, is to try it with Gunpowder in a Spoon; if it burns dry, and afterwards fires the Gunpowder, it is an infallible Sign of its Goodness.

[*Raisins* are the dry'd Fruit of the *Vitis Vinifera*, J. B. 2. 67. Mont. Ind. 55. brought from different Countries: Those used in Medicine with us are the *Raisins of the Sun* and those call'd *Malaga Raisins*; the first of which are not suffer'd to ripen regularly, but the Stalk that supports the Bunch is cut half through when they have attain'd about half their Bigness: so that they receive afterwards but a Part of the Juices they otherwise would; and when they are become dry enough, by the want of Juices and the Heat of the Sun, they are cut down and preserved for Use.

The other Kind, or *Malaga Raisins*, are suffer'd to ripen naturally, and afterwards dried in the Shade.

In all detergent and purging Compositions the *Raisins of the Sun* ought to be used; and in all Pectoral and Vulnerary, the *Malagas*.

The Wines used in Medicine are ten. 1. *Canariense*, Canary Sack. 2. *Malacense*, *Malaga* Sack. 3. *Xeranum*, Sherry Sack. 4. *Alo-nense*, *Alicant* Wine, commonly call'd Tent. 5. *Portuense*, *Porto Port* Wine, the Red and the White. 6. *Ulyssiponense*, *Lisbon* Wine. 7. *Gall-icum Album*, *French White* Wine. 8. *Galli-cum rubrum* *Claretum dictum*, *Claret*. 9. *Rhe-nanum*, *Rhenish*. And 10. *Cretica sive Mos-chatellina rubra*, *Red Muscadine*, which is commonly sold for Tent.]

61. Of White and Red Tartar.

Pomet. **TARTAR** is a Sort of Stone which is found sticking to the Casks of white or red *German* Wines, and is de-nominated according to the Place from whence it is brought. The finest *Tartar* is that of *Germany*,

because of its Thickness, which is owing to the Time that it remains in the Casks. It ought to be thick, easy to break, white without and brilliant within, and as little earthy or dreggy as may be; and the Red is the better the nearer it approaches to the former. The next Sort is what comes from *Provence* and *Languedoc*, which comes nearest to that of the *Rhine*. The third Sort is what we now call the Gravel of *Lyons*, which differs not from that of *Paris*, save only that it is a little thicker and of a higher Colour. The Use of *Tartar*, and the Gravel, is for the Dyers, Goldsmiths and Refiners, to whiten Silver; and likewise for several Chymical Operations mention'd hereafter: The White is preferr'd to the Red, as being much better.

62. Of Crystals of Tartar.

THE Cream, or *Crystals*, of *Tartar*, is a white or red *Tartar* reduced to Powder, and by Means of boiling Water converted into little white *Crystals*, after the Manner as will be shew'd hereafter. The best Cream of *Tartar* is brought us from *Montpellier*, and other Parts about *Nismes*, where they make great Quantities; but the last is less fine than that of *Montpellier*.

To purify *Tartar*; take good white *Crystalline Tartar*, ten Pounds, beat it into fine Powder, and dissolve it in six Gallons of boiling Spring Water and continue the Boiling 'till it is dissolved; then presently strain it hot through a Bag, and stir the strained Liquor constantly round with a wooden Slice 'till it is cold; then let it rest, and in two or three Hours after the pure and fine *Tartar* will sink to the Bottom of the Vessel, in the Form of a shining Powder. This *Tartar* is good to attenuate and dissolve gross and tartarous Humours, which cause Obstructions in the Regions of the Belly, Liver, Spleen, Mesentery, Pancreas, Reins and Womb. It is an universal Digestive and Deoppilative, and for this Reason is commonly given as a Preparative to stronger Purgations; and it is good for all such as are naturally hot and costive, and do not easily go to Stool, gently opening and loosening the Bowels, without offending the Stomach or disturbing the other Functions of Nature. Dose from two Drams to half an Ounce and upwards.

For crystallizing and making Cream of *Tartar*: Dissolve what Quantity you please of the best white *Tartar*, in a large Quantity of boiling Water; which Liquor pass hot through a Bag, into an earthen or glass Vessel; evaporate about half of it away, and then set it in a cool Place to crystallize for two or three Days; evaporate again half the Liquor, and crystallize again, 'till you have

have got all the Cryſtals. What ſwims on the Top is call'd the Cream of *Tartar*, and the Shooting on the Sides are call'd Cryſtals of *Tartar*. The Virtues of both theſe are the ſame with the former, being aperitive and purgative, good for cachectical, hydropical, and aſthmatical Perſons, and excellent againſt *Tertian* and *Quartan Agues*; and the Doſe and Way of giving are the ſame.

63. Of Soluble Tartar, or the Vegetable Salt.

THE *Vegetable Salt*, or *Soluble Tartar*, is made from the Cream and Salt of Tartar diſſolv'd together; it is lately come into Uſe, and is ſaid to be the Invention of Friar *Auge*, the Capuchin; the Sale of which has been incredibly great. Take Cryſtals of Tartar in Powder, eight Ounces, pure Salt of Tartar four Ounces; mix them, and, in a glaz'd earthen Pipkin, put upon them three Pints of pure Spring Water; boil it gently for half an Hour, then letting it cool, filtrate, and evaporate to Dryneſs, ſo will you have eleven Ounces and fix Drams of a white Salt, which keep in a Glaſs cloſe ſtopp'd for Uſe: This will diſſolve in any cold Liquor, and is call'd the *Vegetable Salt*; it has all the Virtues of purified Tartar aforegoing, and may be given from a Scruple to a Dram, in any proper Liquor; but becauſe this Remedy is appropriated to open Obſtructions of the Liver, Spleen, Womb, &c. and that Iron is one of the chief Specificks for this Purpoſe, you may by the following Method unite the two Ingredients into one.

64. Of Chalybeated Tartar.

TAKE of the purified Tartar beforemention'd, one Pound; clear Filings of Iron or Steel two Ounces; pure Rain Water, eight Pints; boil all in a clean Iron Kettle, as long as you boil an Egg for eating, or ſomewhat longer; then paſs it thro' a Woollen Strainer, and ſtir the Liquor 'till it be cool'd, and you ſhall have a Powder of a *Chalybeate Tartar*, of a greeniſh Colour, and ſhining when dry, containing in it the Vitriol of *Mars*. This is incomparably more aperitive than the foregoing Preparations, and has all the Virtues of them exalted to a high Degree, and therefore a moſt prevailing Thing againſt the Green-Sickneſs, and other hyſterick Diſeaſes; but if you prepare it of the purified Tartar that is ſoluble, it will eaſily diſſolve in any Liquor, and ſo be more fit for Uſe. Doſe from half a Scruple to half a Dram. *Note*, That the Artiſt had beſt prepare the purified Tartar of which this

is made, by itſelf, becauſe moſt of what is ſold in the Shops is adulterated with Alum or Nitre, or both: Or you may make it thus:

Take of Tartar cryſtalliz'd one Pound; Ruſt of Iron, three Ounces; Water, fix Quarts; boil all together for half an Hour, or ſo long as to diſſolve the Tartar; ſtrain it hot thro' a Bag into an Iron Kettle, and in twelve Hours it will ſhoot into brown Cryſtals at the Sides and Bottom of the Kettle; decant the Liquor, evaporate it half, and ſet it to cryſtallize again in the former Kettle: Continue theſe Operations 'till you have all your Tartar, which dry in the Sun, and keep for Uſe. It is a good Remedy for Obſtructions, eſpecially againſt *Quartan Agues*, having all the Virtues of the purified Tartar, but much more powerful. Doſe from fifteen Grains to two Scruples, in Broth or other proper Liquor.

65. Of Soluble Tartar chalybeated.

TAKE of Tincture of *Mars*, one Pint; of the purified ſoluble Tartar, four Ounces; mix, diſſolve by boiling, and evaporate to Dryneſs; ſo will you have eight Ounces of a ſoluble chalybeate Tartar in a black Powder, which keep for Uſe, in a Glaſs cloſe ſtopp'd. It has all the Virtues of the chalybeate Tartar before, and of the Tincture of *Mars*, being powerful to remove all Kinds of Obſtructions, cure Cachexies, Dropſies, nephritick Cholicks, Obſtructions of Urine, and Stoppages of Terms in Women. Doſe from ten Grains to thirty.

66. Of Emetick Tartar.

TAKE purified Tartar, or Cryſtals of Tartar in Powder, four Ounces; Spirit of Urine, or *Sal Armoniac*, as much as to cover it two Inches; mix and diſſolve; then add Glaſs of Antimony in fine Powder, one Ounce; pure Spring Water, ten Ounces; boil in a Sand Heat ſeven or eight Hours, putting in more Water as the Liquor conſumes; then filtrate and evaporate to Dryneſs. Or thus; Take of the ſoluble Tartar, four Ounces; Glaſs of Antimony in fine Powder, one Ounce; ſar Water, a Quart; mix and boil ſeven or eight Hours, putting in more Water as the Liquor conſumes; then filtrate and evaporate to Dryneſs, ſo will you have a grey Powder, which is a good Emetick.

It is a moſt powerful Thing againſt chronical Diſeaſes, diſpoſing the Patient to Health; it prevails againſt melancholy Madneſs, Frenzies, Deliriums, and particularly againſt all inveterate Pains of the Head, whether *Idiopathetick*, or by Conſent of Parts; it is powerful againſt the Vertigo,

tigo, Epilepsy, Apoplexy, Difficulty of Hearing, Ringing and Noise in the Ears, Loss of Memory, Nauseousness and Loathing at the Stomach, Weakness thereof, Want of Appetite, Wind and Pain in the Stomach and Bowels, the Yellow Jaundice, Dropsy, tedious and long continued Tertian and Quartan Agues, putrid and acute Fevers, Poison immediately receiv'd, a bilious Pleurisy, and all Diseases arising from Cholera, virulent Dysenteries, and the like. It is an Emetick that works with little Violence, and may be given from five Grains to fifteen, in Mutton, Chicken, or Veal Broth.

67. Of the Distillation of Tartar.

THE Distillation of Tartar is made *Pomet.* by the bruising white or red Tartar to a Powder, and putting it in an earthen Retort, to draw off, by the Force of the Fire, a Flegm, which is a white Water, without Taste, and is to be thrown away. When the Flegm is separated, there comes over a reddish Water, which is the Spirit of Tartar, and after that a black Oil that is foetid and very thick, which is what we call black Oil of Tartar, or Oil of Tartar by the Retort. That which remains in the Retort like Coal, after having been calcin'd and whiten'd, by the Means of hot Water, is made into a very white Salt, which is the true Salt of Tartar. The Spirit of Tartar rectified, that is to say, distill'd or drawn over again, is very proper to cure the Epilepsy, Palsy, Asthma, and Scurvy. The Dose is from one Dram to three, in a convenient Liquor.

The black Oil of Tartar by the Retort is admirable for the Cure of Scabs, and is a good Medicine in all the Cases before-mention'd; but as it is too foetid, they rectify it with dry'd Clay before they make use of it. The Salt of Tartar is necessary to make the vegetable Salt with; and is beside something considerable in Physick, as well to take out the Tincture of Vegetables, and to make the white Oil of Tartar, call'd the *Oleum Tartari per Deliquium*, or Liquor of Tartar.

Most of those who make the Salt of Tartar never trouble themselves about drawing off the Spirit or Oil, but only calcine the red Tartar over a Coal Fire, 'till it comes to a Whiteness, and so extract the Salt, and put it up into Bottles for Use. The true, fix'd, or alkaline Salt of Tartar ought to be pure, white, dry, piquant to the Taste, attended with a little Bitterness; and when it is thrown on a Coal Fire, not to sparkle at all.

Abundance of Chymists, especially the meaner Sort, sell a Salt of Tartar made with Salt-petre,

which takes the Eyes of those who know no better, in that it is extremely white; but the Use of it is very improper in the Place of true Salt of Tartar; the Cheat is easy to discover, because this will sparkle upon the Fire, which the true will not do.

They make of the true Salt of Tartar, after they have set it in a Cellar, a white clear Liquor, which is what we improperly call Oil of Tartar *per Deliquium*; for it is only a dissolv'd Salt. Those who would make this Oil, may take the calcin'd Tartar, and place it in a Cellar or Vault, in a Glass hung up in the Air, and the Oil which flows from it is clear and fine as if it had been made from the Salt. There are some People who make this Oil by dissolving Salt of Tartar with Water, and sell it for true Oil; but it is weaker than that made the true Way, and is something reddish.

This Oil has the same Virtues with the Salt, as it is indeed only the Salt in a Liquid Form. The Dose is from ten to thirty Drops.

68. Of Tincture of Salt of Tartar.

THE Tincture of Salt of Tartar is made of Salt of Tartar that has *Pomet.* undergone the strongest Degree of Fire, and afterwards is dissolv'd in Spirit of Wine tartariz'd, which, after it has stood in Infusion some Time, is pour'd off, or decanted into a Bottle to be stopp'd and kept for Use. This Tincture, when rightly prepar'd, ought to be of a good Red. It is used in Physick chiefly for the Scurvy, and to cleanse the Blood. Dose from twenty to forty Drops. It is observable, the better Colour this Tincture is of, the better it is prepar'd; and the older it grows, the more decay'd and fainter the Colour is.

69. Of Tartar Vitriolate.

Magistery of Tartar, or Tartar *Vitriolate*, is composed of Salt of *Pomet.* Tartar, or Oil of Tartar *per Deliquium*, and good Spirit or Oil of Vitriol mix'd together, and dry'd by a Sand Heat to a very fine white Salt, which ought to be as dry and light as possible; but take care that it be not made of Cream of Tartar boil'd in Spirit of Vitriol, as happens too often, and sometimes of Salt-Petre or Crystal Mineral: That made with Cream of Tartar is easy to discover, when not in Powder, by the Hardness of the Grains met with in it; and the last, because it will sparkle on the Fire, and easily dissolve. This is frequently used in Physick as a good Aperitive, &c. and ought to

be kept in a Glass Vial close stopp'd, because it is apt to run to Water.

70. Of the Volatile Salt of Tartar.

Pomet. THE Volatile Salt of Tartar is made from the Lees of White Wine express'd and dry'd in the Sun, or otherwise, put into a Retort and distill'd with a gradual Fire: Mr. Charas was the first who prepar'd this Salt in the true Manner. This Volatile Salt is of a strong diaphoretick Nature, but is more particularly aperitive and diuretick; it ought to be very white, and of a Smell almost as quick and penetrating as the Volatile Salts of Animals. It may be given to five or six Grains in good Wine or other Liquors.

71. Of the Gravell'd Ashes.

THE Gravell'd Ashes are the dry Wine Lees calcin'd; that this may have the due Quality it ought to be in a Stone, new made, of a greenish white Colour, and of a saltish bitter Taste. This is used by the Dyers and other People, that have occasion for it; and the best is that which comes from *Burgundy*, because it is made of the best Wine Lees, and therefore must needs be much better than what our Vinegar-Brewers make.

As this is Wine Lees calcin'd, they make a Salt from it by Means of hot Water, which has the very same Virtues with Salt of Tartar, except that it is more corrosive, as well as the Oil *per Deliquium* that is made from it. This is also employ'd with quick Lime to make a Salt, which, after it has been fus'd in a Crucible, is cast upon a Stone, or into a Bason, and after it is cold, is cut into little Tablets, and put into a Bottle well stopp'd; and these little Stones are true Caustick Stones. There are some likewise made with Oak-Ashes, Alum, and quick Lime, by the Assistance of hot Water and Fire; and these are call'd Velvet Causticks, because they operate more gently.

Tartarum, or Tartar, is a hard stony or crusty Matter, which is found sticking to the Insides of Wine Casks: This Tartar is compos'd of the grossest and most saline Part of the Wine, which is separated by Fermentation, and harden'd to a stony Substance on the Sides of the Cask. There are two Sorts of Tartar, one call'd White Tartar, that is made from White Wine; and the other Red Tartar, that is made from Red Wine.

The White Tartar is separated in much less and thinner Pieces than the Red Tartar, but is much finer, and fuller of Salt. Chuse the thickest,

heaviest, and most brittle, of a greyish or ashy-colour'd White, clean, crystalline, and shining within, and of a sharpish pleasant Taste.

The Red Tartar is divided into large thick Pieces, being to be chosen pure, dry, reddish and weighty; this Tartar is coarser than the White, but of the same Taste, and contains the same Principles, but less of Salt; the best Sort comes from *Germany*, *Languedoc*, and *Provence*. White Tartar is purified by boiling in Water, and straining it thro' Woollen Bags, then evaporating and crystallizing the Liquor, which makes what we call Crystals of Tartar; the Scum or Cream that floats on the Top during the Evaporation, is call'd Cream of Tartar; this when dried, is confounded with the Crystals, which ought to be in little clear shining Bodies, pure, white, heavy and dry, of a sharpish agreeable Taste: It is used to blanch Wax, and also to clarify Whey, a Dram being sufficient for a Pint; this White Tartar yields a great deal of essential acid Salt, and some Oil.

Red Tartar yields less Salt than White, but more Oil and Earth; they both make Vinegars when dissolv'd in Wine. The Crystals differ not from the Tartar itself, but that they contain less earthy Parts in them. All the Tartars from Wine are aperitive, and something laxative, open Obstructions, and excite to Urine, allay or abate Fevers, and are proper to dissolve tough Flegm in the Glands. The Dose of Tartar depurated is from a Dram to three Drams.

72. Of German Black.

WE have brought from *Mayence*, *Frankfort*, and *Straßbourg*, a *Pomet*. Black in Stone and Powder, which is made from Wine Lees burnt and cast into Water, and, after having been dry'd, ground in a Mill and sifted, having burnt Ivory, Bones, or Peach-Stones added to it; and when they are all well ground and mix'd together they make what we call *German Black*. The best is such as is moist and of a shining black Colour, and has been truly prepar'd with burnt Ivory, which exceeds that made of Bones and Peach-Stones, and the worst Sort of Lees; for it is on the Goodness of the Lee that the Fineness of the Colour depends. There are other Blacks made at *Troyes*, *Orleans*, and *Paris*, which bear the Name of the Places where they are made; they are all of them of no other Use than for the Rolling-Press Printers.

[Tartar consists of the acid, oily, and earthy Parts of Wine, and the Lees of Wine are Tartar attenuated, and divided by Fermentation; Tartar may therefore be call'd the Essential Salt of Wine.

White Tartar contains the greatest Proportion of Acid, and *Red Tartar* most Oil and Earth.]

73. Of Figs.

Pomet. **F**IGS are Fruit that are of several Colours ; to wit, the Green, the Violet, the White, and other Colours ; but of all the Sorts we sell none but the Violet and the common *Fig*. When *Figs* are ripe, the People of *Provence* gather them, and dry them upon Sieves and Hurdles. We distinguish the *Provence Figs* into three Kinds, viz. the Violet, the *Marseilles Fig* in small Frails, and the great or fat *Fig*. The Violet *Figs* ought to be large, dry and fresh ; those of *Marseilles*, small, new and dry ; and the great or fat *Figs* as like those of *Marseilles* as possible, not tough, and in small Frails of different Colours.

The *Fig-Tree* is so common in hot Countries, that there is not any other so frequently to be met with either about their Houses or in the Fields : It has a large Trunk, full of Branches spreading largely abroad ; the Wood is very spongy, of a white Colour, the Leaves pretty much resembling those of the Vine, but are a great deal larger, and pour forth a Quantity of milky Juice. The Fruit comes from the Wing of the Leaves, being three-corner'd, and of the Shape of a Pear, in which are contain'd Flowers by the singular Contrivance of Nature, as *Valerius Cordus* first of all observ'd ; these Flowers are single-leav'd, small, concave like a Spoon, ending in a small Point, and of a whitish Colour, inclining to a Purple, with a Pointal or Rudiment of a Seed in the Cavity of the Flower ; the *Fig* is outwardly of a greenish Colour, inclining to a Violet ; these being ripe and dry, stop Catarrhs or Defluxions falling upon the *Uvula* and Windpipe, and qualify the acrimonious *Scrum* trickling down upon the Lungs. In *Portugal*, especially in the Kingdom of *Algarve*, there is a hot, fiery, inflammable Spirit drawn from *Figs* by Distillation, which they use instead of *Aqua Vitæ*, or Brandy.

These several Preparations of *Figs* are good : Take four Ounces of dry'd *Figs*, boil them in a sufficient Quantity of fair Water, and make a Ptisane to be aromatiz'd, with some Drops of Oil of *Sassafras*, or the like ; to be given in the Small Pox, Measles and Asthma : Or, take fat *Figs*, two Ounces, bruise and infuse them in a Pint and a Half of Spirit of Wine a whole Day, then strain out the Liquor, burn it away to the Consistence of a Syrup, to be given in a Cough, Hoarseness and Shortness of Breath : Or else, take of the Roots of Marsh-Mallows and white Lillies, of each two Ounces ; of Mallows, Violets

and Pellitory Leaves, of each a Handful ; Fenugreek Seeds, two Ounces ; twenty fat *Figs* ; Flowers of Camomile and Melilot, one Pugil ; boil them in a sufficient Quantity of Water, and then pulping or forcing them thro' a Hair-Sieve, add of the Ointment of Marsh-Mallows two Ounces, of the Oil of Worms one, and make a Pultice to help Suppuration.

Ficus, *Ficus Communis*, or *Ficus Sativa*, the Fig-Tree, is of a moderate Height, whose Stalk is not strait, but the Bark is smoother than ordinary Trees, of an Ash-colour, the Wood is spongy and soft, and white within ; the Leaves are large, broad, thick, cut in five Divisions or angular Parts, like those of the Vine, but much larger and harder, rougher and blacker, hanging by a Stalk that throws out a milky Liquor when broke. This Tree neither bears Flower nor Husk nor Shell that appear ; but many Botanists pretend that the Flowers are enclosed in the Fruit, and that they are certain Threads like *Stamina* found in the young *Figs*.

This Fruit, when no bigger than a Pea, is call'd *Grossulus* ; when something larger encreased, but yet not ripe, *Grossus seu Grossa* ; and when entirely ripe, *Ficus* : It grows of the Size and Shape of a Pear, of a greenish Colour, whitish without, and reddish within ; fleshy, succulent, viscous, and of a sweet delicious Taste : It affords a flat and almost round Seed. The Roots of the Tree are numerous, long, fair, hard to break, supply'd with Filaments of a yellow Colour. They propagate the *Figs* presently in temperate Climes, but the best grow in *Languedoc*, in *Provence*, and other hot Countries. There are two Species, which differ in Figure, Size, Colour, and Taste ; they are all hard of Digestion, because of their viscous and tough Substance : When they are dry'd in an Oven, they are call'd dry'd *Figs*, *Caricæ* or *Ficus Passæ* ; then they serve for Food and Physick, being easy of Digestion, since they have lost great Store of their viscous Flegm by the Heat of the Oven in drying : *Figs* yield a great deal of Oil and essential Salt ; these soften the Acrimony of the Humours, fortify or strengthen the Breast, hasten the Birth, ease Diseases of the Kidneys or Bladder, being taken in Decoctions, or else they relieve sore Mouths and Throats in Gargles, or apply'd externally to any Part, give Ease and promote Suppuration.

Ficus Indica, vel *Ficus Indica foliis Mali Cotonii similibus*, fructu *ficubus simili* in *Goa*, according to *C. Baubinus*. This is a Tree that grows near *Goa* in *India* ; it is large, very high, and thick, extends its Branches very wide, from whence arise Fibres, like those of the *Cuscuta*, of a golden

golden Colour, which being come to the Ground, grow strong and take Root by little and little from the great Trees, which stretch themselves over all the new Filaments, that adhere likewise to the Earth, and produce Trees after the same Manner, and so on perpetually; so that these Figs multiply in such a Manner as to fill a large Country with Trees of such a large Kind and Height, that they form a spacious massy Forest, which becomes a great Relief and advantageous Shade against the Sun-Beams. The Leaves of the young Branches are like those of the Quince, green without, and white and lanuginous underneath, and serve for Food for the Elephants. The Fruit of the small Fig is made like ours, but red as Blood without and within, sweet and good to eat, but nothing like the *European Fig*. The *Indian Fig* is moistening, cooling, pectoral, and the Bark of the Tree serves for Cloathing.

[Figs are the Fruit of the *Ficus vulgaris*, Park. 1494. *Ficus communis*, C. B. Pin. 457. Externally they are an excellent Suppurative, and internally are much esteem'd as Pectorals and Deurgents.]

The other Species, mention'd by *Lemery*, is the *Ficus Indica arcuata*, Park. 1499. It is of no Use with us, being never brought hither.]

74. Of Brignole Prunelloe, and Prunes.

Pomet. BESIDES Figs, we have considerable Dealings in the *Brignole Prunelloes*, which are brought from *Provence*, especially *Brignole*, a little Village near *St. Maximin*, from whence they take their Surname. These *Prunelloes* are brought in long Cases, but more usually in Boxes that are cover'd with white Paper, artificially cut; they ought to be dry, fair and fleshy; when the Paper that covers them is dry, it is a certain Sign that they are good.

We sell also Abundance of *Prunes*, as the large and the small, *St. Catharine Prunes*, and the little black *Damask*, and *St. Julian Prune*, which we have from *St. Maure's*, *Chinon*, and other Parts of *Touraine*. Besides, we sell a great Quantity of *Prunes*, which are longish and come from *Bordeaux*, and several others from *Monturel*, *Perdrigon*, *Imperial*, and in general all Sorts of Fruits, dry and liquid, which we have brought from other Parts, but especially *Tours*, as dry'd Pears, Apples and Cherries, with Variety of others that are kept for eating in *Lent*. The Choice of all these Fruits is to have them new in Boxes, or little Chests, and as fresh and good at the Bottom as at the Top of the Parcel.

Prunum or *Prune*, is a Fruit of several Kinds, according to the different *Lemery*. Places where it grows, both as to Shape, Size, Colour and Taste; but they are all so well known, I shall only mention the black *Damask Prune*, which we use in Physick, call'd in *Latin*, *Pruna parva dulcia atro-cærulea*, the little, bluish, black sweet *Prunes*; they are of a moderate Size, round, fleshy, cover'd with a black Skin; their Substance red, succulent, not sticking to the Stone, of a good Smell, and sweet pleasant Taste; the Stone is small and longish, enclosing a little Kernel, almost round or oval, of an agreeable Taste, inclining to bitter. These *Prunes* grow upon a Kind of Plum-Tree, of a moderate Height and Size, call'd *Prunus sativa fructu parvo dulci atro-cæruleo*; the Leaves are longish, pretty broad, slightly indented on the Sides; the Flower is composed of five Leaves, disposed like a Rose, of a white Colour; this Tree is cultivated in the Gardens.

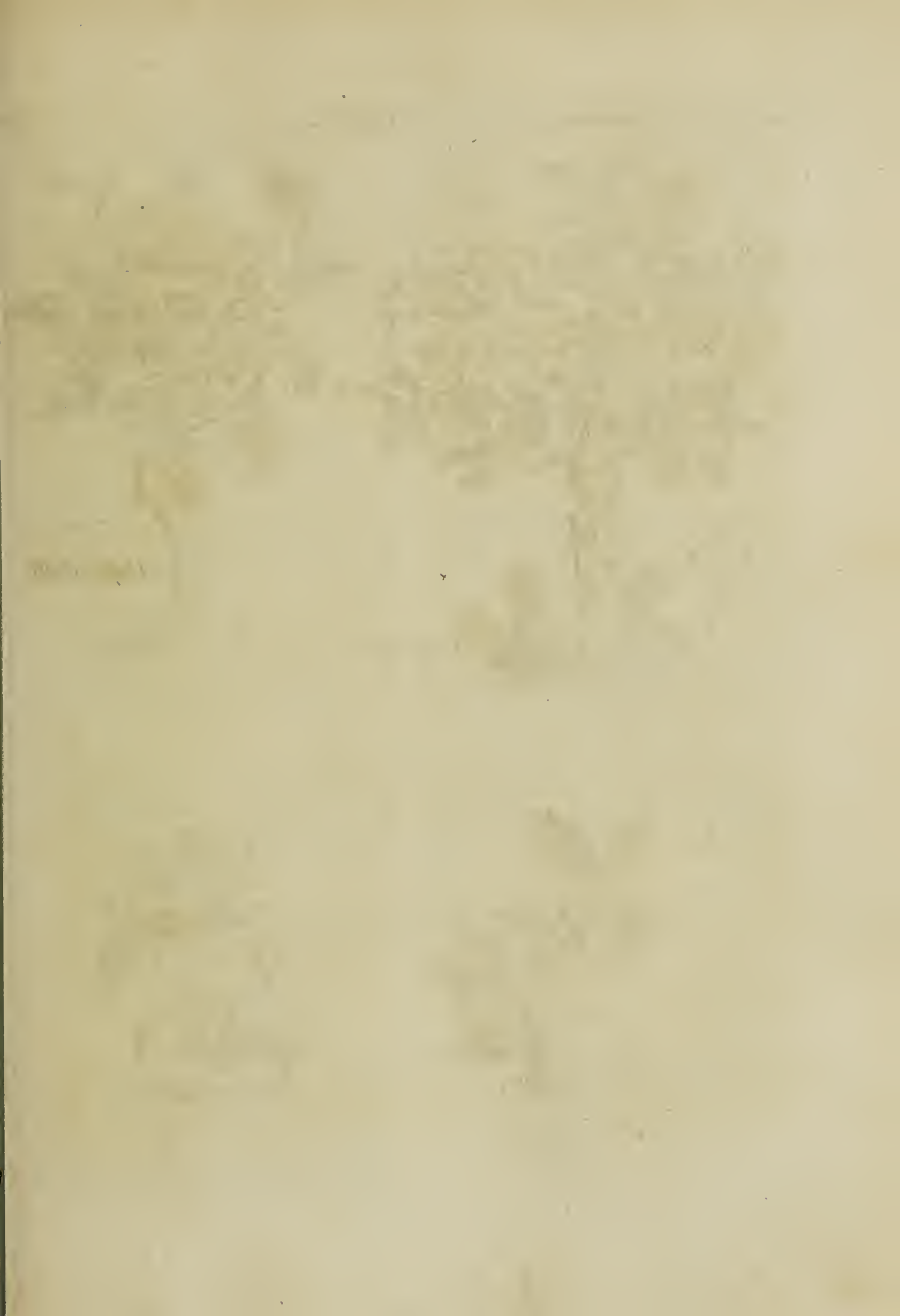
The *Damask Prunes* ripen towards Autumn, and are to be chosen pretty large, well fed, ripe, new gather'd, of a good Taste and Smell; they yield a great deal of Flegm, Oil and essential Salt; they dry great Quantities of these *Prunes* in their Ovens about *Touraine*, and near *Bordeaux*, and disperse them all over *France* and other Parts in the Winter. That which is call'd the *Prunelle* ought to be taken fresh, fleshy, dry, soft and of a good Taste. Fresh or dry'd *Damask Prunes* are moistening, emollient, laxative, being taken in Infusion, Decoction, or eaten in Substance. They find sometimes upon some Sorts of *Prunes*, a white, shining, transparent Gum, like Gum-Arabick, which the Merchants frequently mix among that Drug, as it is like it in Colour and Virtues. It is given in Powder or Mucilage.

[The *Prunelloes* of *Brignole* are the dry'd Fruit of the *Prunus Brignoniensis fructu suavissimo*, Tour. Inst. 632. *Prunus Brignolensis*, Rup. Flor. Jen. 106.]

The *Damask Prune* is the Fruit of the *Prunus fructu magno dulci atro-cæruleo*, Tourn. Inst. 622. Boerh. Ind. alt. 2. 241.

And the common *Prune* is the Fruit of the *Prunus fructu parvo dulci atro-cæruleo*, Tourn. Inst. 622. *Prunus domestica*, Ger. 1311.

To these ought to be added the *Prunellus* of the Shops, the common Sloe-Tree. *Prunus sylvestris* of *Gerrard*, *Parkinson*, &c. of the Pulp of the Fruit of which we make the Conserve of Sloes, and the inspissated Juice of which is the *Acacia Germanica*, which at present is generally sold for the true *Acacia*.]



76.



Mifeltce.

Bazdyendge

Polipody of y^e Oak.

78



Moss.

Aleppo Galls.



light Galls.



Bourdeaux Galls

75. Of the large Chefnuts, call'd by the French, Marons.

THESE are Fruit which we trade in as well as the *Limofin Chefnuts*; but as they are very common, I shall not insist upon a Description, only inform you, that the best Sort are those which grow about *Lyons* and the *Vivarez*; which when good, should be large, fresh, firm and Ash-colour'd. As to the small *Chefnuts*, they should come near to the large, only be clearer and redder; their Use is to eat as well as the other *Chefnuts*, as all the World knows: Besides, these are of some Use in Physick, because they are astringent.

Castanea, or the *Chefnut-Tree*, is of *Lemery*. two Kinds, one Domestick and the other Wild. The Domestick is call'd *Castanea Sativa* by *Casp. Baubin*: This is a great spreading Tree, at this Day cultivated by all People as well for its Beauty as its Profit, and so well known to every Body, we may be excus'd a Description. The Wild *Chefnut* is call'd *Castanea sylvestris*, quæ peculiariter *Castanea*, or *Castaneæ minores*, the lesser *Chefnut*: This differs no otherwise from the former, but as it grows wild instead of being improv'd: It is much less in Size, and the Fruit smaller: It grows plentifully in the *Limofin*, in *Languedoc*, and supports a great many Persons in the World, and especially the Poor. The large Sort of *Chefnuts* that grow in the hot Countries are call'd *Maronæ*, or *Marons*, most of which are brought from the *Vivarez* and the *Limofin*. Chuse such as are largest, the most fleshy, and of the best Nutriment; they all abound with a good deal of Oil and a little Salt. The *Chefnuts*, especially the small, are astringent, and the Rind is used to stop the *Fluor Albus* in Women.

[*Chefnuts* are the Fruit of the *Castanea Sativa*, Ger. Park. &c.

The Wild *Chefnut*, mention'd by *Lemery*, is the *Castanea sylvestris*, *Jonf. Dendr.* 118. *Castanea sylvestris quæ peculiariter Castanea*, C. B. Pin. 419.

The first is cultivated in Walks, &c. the other is wild in some of our Woods.]

76. Of the Oak.

THE *Oak* is a Tree known to all the World, as well because of its Durableness, as for the different Uses made of it. This Tree is the Emblem of Virtue, Strength, Firmness and Duration, and was therefore by the Antients dedicated to *Jupiter*. Some

pretend that this Tree is a mortal Enemy to the Olive and the Walnut-Tree; so that neither of them can live near it.

The first Thing, and the most considerable we have from the *Oak*, is the Mistletoe, which is an Excrecence that is found growing to the said Tree: This Production appears extraordinary, in that the *Oaks* do not produce the Mistletoe in all Places: There are few that I know of in this Respect like those that are met with betwixt *Rome* and *Loretto*, especially near a little Village nam'd *Foligni*, about the Mid-way. This Excrecence resembles the Branches of Trees, and is of a solid, heavy Substance, of a greenish brown outwardly, and of a yellowish white within.

The Branches are hard and compact, and bear several little Sprigs which intermingle with each other, and from whence arise a great many longish, thick Leaves, that are semi-circular, of a pale green; the Berries are white, resembling our little white Currans, and these Berries contain a viscid Humour which the Antients used to make Glue with. The Mistletoe continues always green during the Time it remains upon the Tree, Chuse the largest, heaviest, and best fed: You may know if it be true by the deep Colour within, but the surest Way is to see that some Part of the *Oak* hangs to it. They attribute a great many Virtues to the Mistletoe of the *Oak*, and the Antients rever'd it, and held it sacred as well as the Tree itself. *Julius Cæsar* and *Pliny* say, that the *Druids* assembled themselves under these Trees to perform their Devotion; these *Druids* inhabited the Countries we now call *Ville de Dreux*, near *Chartres*, whence it is evident that there have been *Oaks* which bore Mistletoe in *France*.

This Mistletoe, taken inwardly, is esteem'd an excellent Remedy against the Palsy, Apoplexy, Falling Sickness, and Worms: It is also an Ingredient in many Compositions for external Use, as Ointments, Plaisters, &c. as a Resolvent. The Berries are acrid and bitter, and their Juice is good to ripen Abscesses, and hasten their Suppuration.

Mistletoe is also the Basis of the *Pulvis ad Gut-tetam*.

It is found growing upon many other Trees as well as the *Oak*; but its Virtues are supposed not to be so great when it is taken from any other Tree.

All the Parts of the *Oak* contain a great deal of Oil and essential Salt; the Bark and Leaves are astringent and resolvent, good in the Gout, Sciatica and Rheumatisms, used in Fomentations, and taken inwardly in Decoctions to stop Diarrhæas and Hemorrhages.

The second Thing we have from the *Oak* is a little Plant we call Polypody of the *Oak*, which is like what we have from Walls: This Sort of Plant grows from Places where the Branches of the *Oak* are forked, by Means of some small Earth that lights there, and the Water which drops upon it: It grows likewise upon the Stump of the said Tree. We rarely use this Polypody, because it is not so proper, since that is much better which grows upon old Walls, which is the Sort that is brought to us about *Paris*. Chuse the Root such as is new, plump, dry, brittle, of a reddish, tawny Colour on the Outside, and greenish within; sweet and Sugar-like, inclining something to a Liquorice Taste.

Quercus vulgaris, the common *Oak*, *Lemery*. is a thick, strait, durable Tree, spreading its Branches wide; the Trunk is cover'd with a thick rugged Bark; the Leaves are large, longish, and broad, deep slash'd or indented, hanging upon short Stalks; the Flowers are in long Shells or Husks, composed of little Threads hanging upon one another by a fine Fibre or String; these Husks leave no Fruit behind them, the Fruit growing in different Parts, which are the Acorns; that are about the Size of the Olive, of an oval or cylindrical Figure, contain'd in a hard grey Cup, call'd in *Latin*, *Cupula seu Calix*; this Acorn is cover'd with a hard Rind, that is smooth and shining; green at first, but yellowish as it grows riper; within this Rind we meet with a Sort of Kernel, or hard fleshy Seed, composed of two Lobes. The Acorns hang upon the Tree by long or short slender Stalks, and their Taste is astringent.

All the Parts of the *Oak* contain in them a good deal of Oil and essential Salt: The Acorn, call'd in *Latin*, *Glans Quercina*, is likewise employ'd in Medicine. Chuse such as are large, and plump, separated from the Rind, and dry'd gently; but take care of Worms, to which they are subject, let them be reduc'd to Powder before using; they are astringent, and proper to appease Wind Cholicks, and the Fluxes of Women newly deliver'd.

Polypodium, or common Polypody, hath a Root taking a very slight and superficial Hold of the Earth; it is pithy and brittle, about the third Part of an Inch thick; within, it is of a pale green Colour, but outwardly a little reddish, and cover'd over with fine thin Scales when it is fresh and green; but being dry, it becomes of a more red Colour: It is knotty, or full of round Knobs, and adorn'd with several small Filaments, like Hairs: Its Pith is sweetish, with somewhat of a sharp, austere, or styptick Taste. The Leaves spring out of the Knots or hollow Knobs of the Roots; they are

single, about nine Inches in Length, and parted into several Jags or Scollops, cut close into the Ribs; they are sharp-pointed, of a light green Colour; it bears no Flowers, but there arise several small Knobs, like Blisters, upon the lower or under Part of the uppermost Jags of the Leaves, rank'd in a double Order; they are round, and about the sixth Part of an Inch thick, consisting of a fine Dust, that is first a little yellowish, and turns of a bright Golden Colour: Every Grain of this Dust is a Sort of small Seed-Vessel, being of a round Figure, and membranous, which, when ripe, breaks into two equal Parts, and pours forth several Seeds, so small that they can scarcely be discern'd by the naked Eye.

Polypody grows upon Rocks, old Walls, and antient decay'd Trees; but that which grows upon old *Oaks* is reckon'd the best; upon which Account Polypody of the *Oak* is commonly prescribed, and is rank'd among the purging Medicines: Yet *Dodonæus* denies its cathartick Quality; neither ought we to dissemble the Matter, for the Decoction of it scarcely moves the Belly, but the Powder of it does something, being given from one Dram to two Drams.

This Root contains a great deal of Oil, and no small Quantity of an acid Flegm; but this is, as it were, suffocated by the Oil, which is the Cause that it produces no Alteration of Colour on blue Paper, when it is dipp'd in the Infusion of it. There is likewise a large Quantity of Earth extracted from Polypody by a chymical Resolution. 'Tis from this Earth that its styptick and brackish Taste proceeds. The Roots are very properly administer'd in all Distempers proceeding from a saltish Disposition of the Blood; such as the Scurvy, Rickets, and Hypochondriack Passions; they also help to abate an inveterate Cough, when it is attended with a saltish Spittle. They are prescribed in Potions and Apozems.

Take of Polypody of the *Oak*, two Ounces; Salt of Prunella, one Dram; infuse them in a Quart of warm Water; strain it: To be taken by Cupfuls or Spoonfuls. as an Apozem. Or, take Polypody of the *Oak*, one Ounce and a half; Elecampane-Roots, three Ounces; infuse them all Night in a Quart of warm Water; in the strain'd Liquor add two Ounces of *Calabrian* Manna; mix and make a Ptisan to be drank. Take of the Decoction of Polypody Roots, six Ounces, in which infuse two Drams of Sena-Leaves; in the strain'd Liquor dissolve the Electuary of *Diacarthamum*, three Drams; mix and make a purging Potion. Polypody Roots are used in the Catholick Electuary, the Lenitive Electuary,

Electuary, the Confection of *Hamech*, the Panchymagog Extract of *Hartman*; *Quercetan's* Pills of Tartar, and in the Hiera of Coloquintida.

[The *Oak*, whose Bark, &c. are used in Medicine, is the *Quercus vulgaris*, Ger. 1156. *Quercus latifolia*, Park. 1386. The Mistletoe is the *Viscus Quercus et aliarum arborum*, J. B. 1. 89. *Viscum vulgare*, Park. 1392.

And the Polypody is the *Polypodium vulgare*, C. B. Park. &c.

It is to be observ'd, that both these are much more frequently found on other Trees, than on the *Oak*.

The other Species of the *Oak*, mention'd in the Catalogues of Officinal Trees, are,

1. The *Phagus*, *sive Esculus*, Park. 1387. J. B. 1. 2. 74. the Esculent or *Sweet Oak*, the Acorn of which is eatable, not being so bitter as those of the rest.

2. The *Cerrus*, Aldrov. Dendr. 253. *Cerris majore glande*, Ger. 1162. *Quercus Calyce echinato, glande majore*, C. B. Pin. 420. the *Bitter Oak*. And,

3. The *Robur tertia Clusii*, J. B. 1. 2. 76. *Robur sive Galla major altera*, Ger. Em. 1348. the *Gall Oak*.

The common *Oak* grows naturally in many Kingdoms; the *Esculus* is found in *Greece* and *Dalmatia*, the *Cerrus* in *Italy*, and the last in *Smyrna* and other Places.]

77. Of the Oil of Acorns.

Pomet. BESIDES the Polypody, the *Oak* produces *Acorns*, which are its proper Fruit, and People pretend to make and sell the Oil of them; but as I never could succeed in the making it, I shall only observe, that all the *Oil of Acorns* that the People of *Provence* send us, is nothing but the Ben or Nut Oil, in which the *Acorn* has been infused. The great Scarcity of the true Oil, is the Reason that the World attributes such great Virtues to it, as they do to the Oil of Talck. There may be a true *Oil of Acorns* drawn by the Retort, but it will be black, and of an ill Smell.

The *Oak* produces, beside the *Acorn*, the Mistletoe, and Polypody, a Moss which is what we call *Ufnea*; it enters the Compositions of the *Cypripus* Powders; those of *Frachipane* and *Le Mare-shale*, or the Farriers Powder, which we have brought from *Montpellier*. The true Description of making these Powders is unknown to me, which obliges me to refer the Reader to a Description made by the *Sieur Barbe* in a little Treatise of his printed at *Lyons*.

78. Of Galls.

GALLS are produc'd by a Kind of *Oak* that grows plentifully in the *Pomet. Levant*, especially about *Aleppo* and *Tripoli*, which are those we call *Aleppo* and *Tripoli Galls*: Besides, they are brought from *Smyrna*. There are also some grown in *France*, in *Provence*, and in *Gascoigny*, but much inferior to those of the *Levant*, in that they are usually reddish, light, and altogether smooth; and those of the *Levant* are prickly, from whence they are denominated the *Prickly Galls*; they are also more heavy, and are either blackish, or greenish, or whitish. The Variety of these Fruit occasions that they are put to different Uses; those of *Aleppo* and *Tripoli* are for dying black, and making Ink; the White for dying or staining Linnen, and the Light *French Galls*, for dying Silk: All the Sorts are of some Use in Physick, especially the more astringent and styptick they are; being good to draw together and fasten loose Parts, to dry up Rheums and other Fluxes, especially such as fall upon the Gums, Almonds of the Throat, and other Parts of the Mouth; used in a Decoction, in Water or Wine, they cure Diarrhoeas, Dysenteries, and are good against all Weaknesses of the Bowels: A Fumigation in Claret is good for Women to sit upon, that are troubled with a Flux of Reds or Whites, or falling down of the Womb; as also of the Fundament: The Ashes quenched in Wine or Vinegar, being apply'd, stanch Blood; and the Powder of the crude *Galls* may be given inwardly from ten Grains to a Scruple, to all the Purposes aforesaid.

There grows upon a Species of *Oak* in *Turky* a little reddish Fruit, of the Bigness of the Hazel-Nut, call'd by the *Turks*, *Bazgendge*, whose Figure is represented by the Impression of the *Oak*. The *Levantines*, especially those of *Aleppo*, take a hundred Drams of Cochineal, which they call *Cormeti*; fifty Drams of *Bazgendge*, and fifty Drams of Tartar; and after powdering them all, they make a very fine Scarlet. This Fruit is very scarce in *France*, for which Reason it is not used there, tho' some of it is frequently found among the *Galls* and thrown away, because it is not known.

Galla, or the *Gall-Nut*, is an Excrescence which grows upon an *Oak* in *Lemery. the Levant*, whose Origin proceeds from this, that certain Insects bite the tenderest Part of the Tree; so that an Humour flows out into a Shell or Bladder, which fills and hardens as it grows on. There are several Sorts of *Galls*, that differ according to their Size, Shape, or Colour,

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lour,

our, and by the Surface of them being smooth or rugged; they are usually round, and as big as the common Nut, some as the Filbert, rough or prickly, white, green, or black; the best comes from *Alippo* and *Tripoli*. Chuse the best sed and weightiest.

There are also *Galls* grow in *Gascoigny*, and in *Provence*, which differ from those of the *Levant*, being smooth, light, reddish, and affording a less Tincture. They are astringent, and enter several medicinal Compositions; as Plaisters, Ointments, Injections, Fomentations, &c.

[The Species of Oak from which we have the greatest Quantity of *Galls*, is the last of those mention'd at the End of the foregoing Chapter; the Insect whose Puncture produces them, is a small black Ichneumon Fly, which leaves its Egg within them, which afterwards hatches into a Maggot, and from that, after a Week's Rest in its Chrysalis State, becomes a Fly, like that whose Egg produced it.

79. Of Agarick.

Pomet. **A**garick is an Excrescence that is found upon the Trunks and large Branches of several Trees, but chiefly upon the Larch-Tree, call'd by the *Latins*, *Larix*, and upon several Sorts of Oaks; the best is white, light, tender, brittle, and of a bitter Taste, pungent, and a little styptick; and this is the *Agarick* the Antients used to call the Female: As for that which is term'd the Male, it is usually heavy, yellowish, and woody, and ought to be entirely rejected from physical Uses. The best *Agarick* is that from the *Levant*, it being abundantly better than what comes from *Savoy* or *Dauphiny*. We have likewise some from *Holland*, that is rasp'd and whiten'd on the Outside with Chalk, which ought also entirely to be rejected; in short, none is fit for Use but that of the Larch-Tree and what we have from the *Levant*: The Dyers use this to dye Black with.

The *Agarick* of the Oak is generally reddish and heavy, and of very little Value; for which Reason I shall say nothing more about it.

Agarick was a Medicine so familiar to the Antients, that they made use of it not only for purging Flegm, but likewise in all Distempers proceeding from gross Humours and Obstructions; such as the Epilepsy, Vertigo, or Giddiness of the Head, Madness, Melancholy, Asthma, and Distempers incident to the Stomach, and the rest of that Kind; yet they complain'd that it weaken'd the Bowels, and purg'd too churlishly; upon which Account *Galen* steep'd the Powder of it with Ginger, and gave it, to a Dram, in Oxy-

mel, or Honey of Squills. It is prescrib'd in Powder, tho' rarely, from a Dram to two; but in Decoction, or Infusion, from two Drams to half an Ounce.

By a chymical Dissolution it passeth almost all away into Oil: It yields no volatile Salt, but abounds with a Sort of scaly Earth, and an acid Flegm; the Infusion of *Agarick* makes the blue Paper of a purple Colour. It ought to be corrected with Cloves, Cinnamon, Mace, Mint, Wormwood, and others of this Kind. Its Slowness in working may be help'd or promoted with Scammony and Calomel; or it may be wet in some purging Decoction made of Asarabacca, Sena, and other Purgatives, and then dry'd again, and form'd into Lozenges, adding Balsam of *Perru*, or Oil of Cinnamon to correct it.

These Lozenges are commonly kept prepar'd in the Shops: But we must not forget to take notice, that *Lusitanus* admonishes us to make use of the Troches of *Agarick*, or Lozenges, while they are fresh, and new made, lest their Virtue be weaken'd by long keeping. Besides the Troches, there is an Extract and Rosin prepar'd from *Agarick*: It is likewise used in the Confection of *Hamech*, *Hiera Picra*, the Blessed Extract, and Pills of *Euphorbium*.

[*Agarick* is the *Agaricus sive Fungus Lacricis*, C. B. Pin. 375. *Agaricum*, J. B. I. 268. It is cover'd with a yellow Bark, and is white within; it tastes sweet at first, but bitter after a Moment's holding in the Mouth; this is

The Female, which is used in Medicine.

The Male is yellow, hard, and woody, and is used in Dying.]

80. Of the Confection of Hamech.

Pomet. **A**garick being one of the Ingredients of this Composition, which we have brought from *Montpellier*, together with Confect of Hyacinth and Alkermes, Treacle and Mithridate, I thought it not improper to mention it in this Place: Tho' it is almost out of Practice in some Countries, it is a good Medicine if faithfully prepar'd; however, I shall only give you the Receipt, and leave you to consult the Method of preparing it in the Dispensatories of Mr. *Charas* and others.

Take Polypody of the Oak, Raisins stoned, Damask Prunes, of each four Ounces; Citrine, Chebulick, and *Indian* Myrobalans, Violet-Seeds, Coloquintida, White *Agarick*, Sena, of each two Ounces; Wormwood, Thyme, of each one Ounce; Red Rofs, Aniseed, and Fennel, of each six Drams; Juice of Fumitory depurated, a Quart; Sugar and pure Honey, of each three

three Pounds ; Cassia and Tamarinds pulp'd, and pure Manna, of each four Ounces ; Rhubarb, White Agarick, *Alexandrian* Sena, of each six Ounces ; the five Myrobalans and Epythymum, of each six Ounces ; Cinnamon and Ginger, of each two Drams : Mix all together according to Art, and make a soft Electuary, working it well and preparing it truly, and it will keep a long Time. This Confect, thus artfully made, is of a shining black, and a good Consistence. This, with the other before-mention'd, we reckon the five great Compositions of the Shops.

We sell likewise dry'd Morells and Truffles, and black Sow-bread, which are brought from *Provence* and *Languedoc*, with the Bulbs of *Tuberoſe*, *Ranunculus's*, and *Junquils*, which come from *Italy*, *Provence*, and some from *Constantinople*, together with *Jews-Ears*, which is a fungous Excreſcence found on the Stumps of Elder-Trees, before their Leaves appear, something in the Form of an Ear, from whence it had its Name, &c. And they bring us from *St. Fleur* in *Auvergne* a certain grey Earth, in little Shells, which is what we call *Perelle*, and the People of that Country tear it from the Rocks : This Earth is lodg'd there by the Winds, which carry the Earth

upon the Rock, and by the Rain and the Sun is calcin'd after being wet. The Use of it is to make *Orseille*, of which mention was made in the Chapter of *Turnſol*. We sell, besides, a certain Herb which we call *Preſſe*, and the Botanists *Equisetum*, or Horse-tail, which the Cabinet-makers, and Artificers in Wood, use to polish their Works withal.

[The Confection of *Hamech* is now entirely out of use.

The *Jews-Ears* are in great Esteem among the common People, as a Remedy for Sore Throats ; but I have observ'd that they are never seen in the Shops : What is constantly sold under that Name, is the *Fungus membranaceus expansus*, R. Syn. Ed. tert. Pag. 18. which our Druggists employ People to gather from the old Water-Pipes about *Iſlington*, and elsewhere.

The true *Jews-Ear* is the *Peziza Auriculum referens*, R. Syn. 195. *Fungus membranaceus Auriculam referens sive Sambucinus*, C. B. Pin. 372. of which I have some fair Specimens, which I found about three Years since on the Elders near the *Neat-Houses* in the Way to *Chelsea*, and which are entirely different from what is sold under that Name.]

The End of the Book of FRUITS.

BOOK the Eighth.

Of G U M S.

P R E F A C E.

WE distinguish Gums into two Sorts; namely, such as are aqueous, and such as are resinous. We understand by the aqueous Gums those that will dissolve in Water, Wine, or other the like Liquids; as Manna, Gum Gutta, or Gamboge; and by the resinous, those that will not dissolve but in Oil, as Gum Elemi, Tacamahaca, and the like, as you will find by the subsequent Discourse. There are some who will add to these two Sorts a third, which they call the Irregular, and which they pretend will not readily dissolve either in Water or Oil, as Myrrh and Benjamin. If Seeds, Roots, Woods, Barks, Flowers, Leaves, and Fruits, are so difficult to distinguish one from the other, Gums are not the less so; and as the Knowledge of them is difficult, there are Substitutes of one Kind or other sold at Times, either thro' Deceit or Ignorance, for almost every Gum in Use.

1. Of the Manna with which God fed the Israelites in the Desert.

WHEN the Israelites had pass'd the Red Sea in a miraculous Manner, and were deliver'd from their Enemies, the Famine pursued them into the Desert, and they murmur'd against Moses: But that faithful Minister of God made his Supplication to Heaven, and God delay'd not to give them Food; for there fell a great Quantity of Quails in their Camp, and the next Morning it rained Manna upon the Earth, which was continued for forty Years, during the Time the Hebrews remain'd in the Desert. The People were presently surprized when they beheld the Earth all cover'd with a Kind of Grain they were Strangers to: And the Scripture informs us, that not knowing what it was, they cried out with Admiration, *Man hu! Quod est hoc!* What is this! But Moses told them it was the Bread of God that was sent from Heaven, and appointed them to come every Morning before Sun-rise, to gather this divine Food; because when the Day was ad-

vanc'd, it was no Time to gather the Manna, which melted away after the Rising of the Sun.

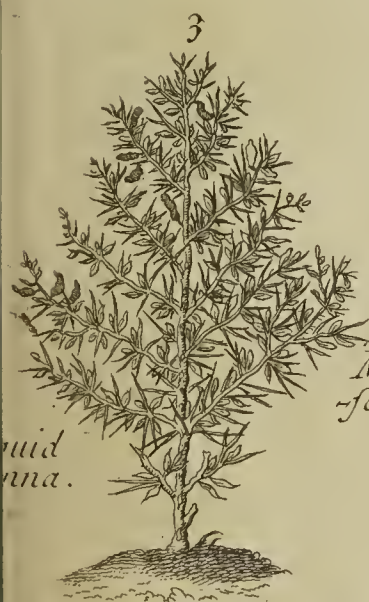
The Jewish, as well as the Christian Interpreters, do not agree about a great many Things relating to this Manna: They are divided about the Etymology of the Word Manna; some will have it that it comes from the Hebrew, *Man hu*, which the Jews pronounc'd when they saw the Earth cover'd with little white Grain or Seeds, which fell during the Night; nevertheless several others, of which Number Buxtorf is one, say, that the Word Manna signifies Food prepar'd, as if he should say, the Food which God had prepar'd for his People. Neither are they at all better agreed about the Nature of this Manna; several maintain that it was the same with the purging Manna now used in Physick; that is to say, a Liquor which falls in the Nature of Dew, and which is congeal'd into little Grains, like those of Coriander. *Valesius*, Physician to the Emperor Charles the Fifth, is of this Opinion. *Cornelius à Lapide*, a very learned Jesuit, says, in his Commentary upon Exodus, that he had seen in Poland little Seeds like Millet, something long and reddish, which fell, during the serene Nights, in June and July, and that they were eaten when boil'd,



2



Calabrian Manna.



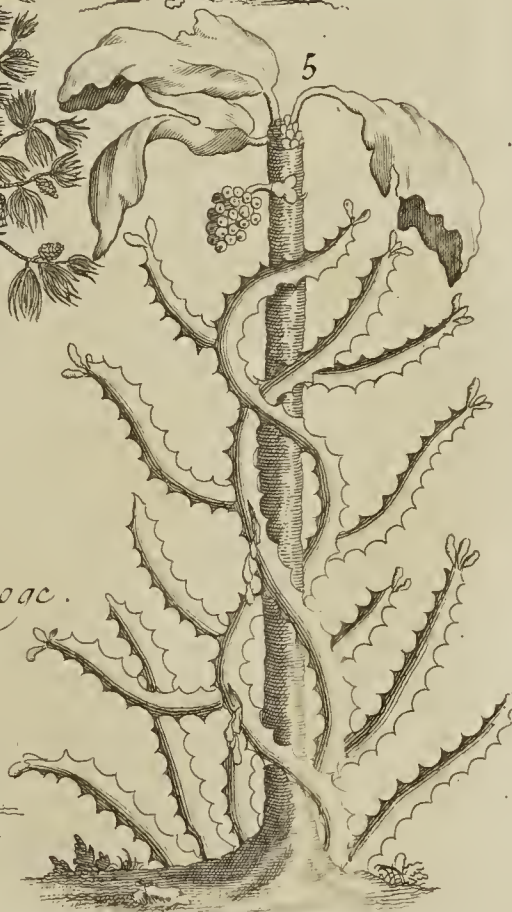
3

*Manna of Brian-
son.*



4

Gamboge.



5

boiled, having the same Taste as the Panick. And I have been confirm'd in this by a Friend of mine, who was a long Time in *Poland*, especially on the Side of *Silesia*, where this Dew falls plentifully. And I have also seen on the Heights of *Dauphiny*, at the Foot of the Mountain of *Geneva*, about Four o'Clock in the Morning, a large Quantity of this *Manna*, which I have taken at first Sight for Hail, but after having tasted it, I found, by its sweet sugary Taste, that it was a Dew like that spoke of in the Holy Scriptures; for as soon as the Sun was up, it dissolv'd.

Those who hold that the *Manna* with which God fed the *Jews* in the Desert, was not the same with that used in Physick, say, that that which purges must weaken and cannot nourish; but *Vossius* answers this Difficulty, and says, that this *Manna* differ'd not at all in its Nature, but as to Accidents, from that used in Physick; and this Difference arose from the Preparation which the Angels made in sweetning and cleansing this Dew from its Aqueous Parts that the common *Manna* is loaded with, in order to make it fit for Bread, &c. as that which falls in *Poland* in the Months of *June* and *July* is. Beside which, the constant Use of a Medicine will hinder it from having its common Effect. We see Men daily who make their Food out of strong Poisons by a continued Custom and Habit; and Wine shall be highly serviceable to Persons when sick, who do not drink it at other Times; shall be hurtful to Persons in Illness who make a constant Use of it when well. *Valesius* does not doubt in the least but that the *Manna* in the Desert did at first purge the *Hebrews*, who were replete with gross Humours, which they collected by the Use of Garlick, Leeks and Onions, of which they fed during their Abode in *Egypt*; and that after they had been duly purged, the *Manna* became nutritive, especially after having been prepar'd or purified by the Angels; for it is expressly said in *Psalms* lxxviii. ver. 23, 24, and 25. *God commanded the Clouds above, and opened the Doors of Heaven; he rained down Manna also upon them for to eat, and gave them Food from Heaven: So Man did eat Angels Food.* And this Explication appears very agreeable to the *Hebrew* Word *Manna*, which signifies Nourishment, or Food prepar'd; as may be inferr'd from the 31st Verse of the 11th Chapter of *Exodus*, where it is said, *And the Taste of Manna was like Wafers made with Honey.*

2. Of Manna.

Poet. **T**HAT which we call and sell now by the Name of *Manna*, is a white crystalline Liquor that flows with-

out Incision, and with Incision from both the wild and domestick Ashes, which the *Italians* call *Fraxini* and *Orni*, that grow plentifully in *Calabria* and *Sicily*, but chiefly at *Gallipoli*, about Mount Saint *Angelo*, and *Tolse*, from whence almost all the *Manna* we now sell is brought.

We sell several Kinds by the Name of *Calabrian Manna*. The first and best Sort is the *Manna* of Mount St. *Angelo*, but that is fatter than the other Kinds, and therefore very little demanded by People who do not understand it: The second is the *Sicilian Manna*, which is usually white, dry, and teary. The third Sort of *Manna* is that of *Tolse*; this is the worst of the three, and is that which is improperly call'd *Briançon Manna*, which is another Kind, as will be seen hereafter; this is dry, white, and very apt to be full of Dirt.

The *Arabians* look'd upon *Manna* to be a Sort of airy Honey, or a Dew that falls from the Heavens: And this was a common receiv'd Opinion for many Ages; but *Angelus Sala*, and *Bartholomæus ab Urbe veteri*, two *Franciscan Friars*, who, in 1545, publish'd Commentaries upon *Mesue*, were the first that I know of, that in their Writings affirm'd *Manna* to be truly the concentered Juice of the Ash-Tree, as well the common as of the wild, generally call'd *Quickbeam*. *Donatus Antonius ab alto mari*, a Physician and Philosopher of *Naples*, who flourish'd about the Year 1685, has also confirm'd this Opinion by several Observations.

For first, having cover'd Ash-Trees for several Days and Nights together all over close with Sheets, so that no Dew cou'd possibly come at them; yet he has found *Manna* upon these Trees so cover'd, under the Sheets, when at the same Time not the least Sign or Impression of any Dew or Honey was to be seen upon the upper Part of the Sheets. 2dly, All those who make it their Business to gather *Manna*, freely own and confess that it drops out again of the same Places of the Trees, from whence it was before taken, and by Degrees coagulates with the Heat of the Sun. 3dly, In the Trunks of the Ash-Trees, little Bladders, or as it were Blisters, are often observ'd, or rise near the Bark, which are fill'd with a Liquor of a white Colour, and sweet Taste, which afterwards thickening, is turn'd into a very good Sort of *Manna*. 4thly, The very same Liquor flows out of the Bark of the Ash when it is wounded: And it is very observable, that Grasshoppers and other small Insects very often bore through the Bark of this Tree, that they may suck this sweet Tear; and when they have left it, the *Manna* sweats out of the small Wounds that they have made. 5thly, Wild
Ashes

Ashes being cut down by Coopers to make Hoops for Wine Vessels, it often happens that no small Quantity of *Manna* flows out of their Stocks or Boughs, being cloven or split lengthways, and exposed to the Heat of the Sun. 6thly, Such as are employed in the making of Charcoal, confidently assure us, that they have often observ'd *Manna* sweat out of the Ash-Wood, after it has been kindled and thrown in the Fire.

The same Author further takes Notice, that the same Trees yield *Manna* every Year, but not all of them indifferently; upon which Account there are a great many that make it their Business, for the Sake of Gain, to bring up these Trees: Yet there are in these Places Trees of the same Kind, that afford no *Manna*. Moreover the same Author tells us, that the *Manna* runs chiefly out of that Part where the Footstalks of the Leaves are inserted into the Branches; for in these Parts the Vessels being thinner and finer, are the more easily divided; wherefore he does with very good Reason observe, that *Manna* never drops out of the Leaves of this Tree, unless it is at Noon, or about the hottest Time of the Day; because there is a large Degree of Heat requir'd for the fetching of this Juice out of its proper Vessels, and conveying or translating it unto the distant Leaves. In the Kingdom of Naples and Sicily, *Manna* naturally flows and drops out of the Leaves of the aforesaid Trees in the Form of a clear Liquor, and afterwards thickens and becomes a little hard; but especially in the Month of June, when the Weather is very hot and dry; next Day, with a Knife, they scrape and pick it off the Leaves, lest it shou'd be dissolv'd and wash'd away by the falling of Rains, or the Moistness and Dampness of Air; then they carefully put it up in Vessels, well glazed; and after that they expose it to the Heat of the Sun, 'till it will not stick nor cleave any more to the Fingers; otherwise it wou'd melt and lose its Whiteness.

Manna flows spontaneously from the Middle of June to the End of July, unless Rains happen to fall; after the Month of July, the Country People or Peasants make an Incision into the Bark of the Ash-Tree, even to the Wood, from whence the Liquor of *Manna* continues to flow and drop, from Noon-Time to Six o'Clock in the Evening incessantly, which afterwards runs together into thick Lumps or Clots, but of a darkish Colour. This spontaneous *Manna*, by the *Italians* is call'd *Manna Di fronda*, upon Account that it drops from the Leaves of the Ash-Tree, like Sweat in the Dog Days or Heat of Summer. But that Sort of concreted *Manna*, that proceeds from the Bark of those Trees being wounded, is call'd by the *Italians* *Sperfaella* and *Stoisata*, or *Manna*

Dicorpa. This Opinion of *Altomarus* has been defended by *Gropius*, *Labellius Cæsalpinus*, *Cos-tæus*, *Cornelius Consentinus*, *Boccone*, and others; who have given more Credit to their Eyes than to Authority.

Manna is approv'd of when it is fat and a little clear, of a sweet Taste like Sugar, and biting to the Tongue. Chuse that which is fresh and light, from a white Colour inclining to be a little brown, and when the Clots or Lumps being broken, look as if they were sprinkled with Syrup. That is to be rejected which is dry, and as it were spongy, without any Manner of biting Taste; and that is good for nothing that is nauseous, impure and adulterated.

The *Calabrian Manna* is most esteem'd; but besides that, there is a Sort of it sold in the Shops, call'd the *Larch*, or *Briançon Manna*, because it flows from *Larch Trees* growing nigh *Briançon* in *Dauphiny*, of this we shall speak in the next Chapter, but it is but little used, because it is much inferior to the *Neapolitan Manna*. *Calabrian Manna* purges moderately in the Dose, from one Ounce to two or three; it allays the Acrimony of Humours, and is very useful in bilious Distempers, and others attended with Inflammations, such as *Hæmorrhoides*, *Pleurisy*, and *Peripneumony*. It is seldom prescrib'd dry, or by itself, but very often in Potions, &c. As for Example: Take an Ounce or two of this *Manna* and dissolve it in five or six Ounces of warm Water, Broth, Whey, or the like; to which add an Ounce of Syrup of Succory with Rhubarb, or Roses purgative, or Violets, for a Dose. When Patients are afflicted with vomiting, or a Disposition to it, take of *Calabrian Manna* two or three Ounces, Tartar Emetick eight or ten Grains, dissolve them in a Quart of Whey, and let the Patient drink this by Cupfulls, now and then taking a little warm Broth betwixt.

Monsieur *Charas* and others likewise agree, that the true *Manna* is not found upon all Plants, Trees, Rocks, and Earths promiscuously, as some believe, but only upon the ordinary *Fraxinus*, or Ash-Tree, and upon the *Ornus*, or wild Ash. That it is gather'd from the Ash or wild Ash is evident; for that upon some large Tears, the very Print of the Leaf upon which they grow is to be seen, and oftentimes Ash-Tree Leaves are found mix'd with it.

That which comes from the Body of the Ash, and issues voluntarily and freely, as also from the biggest Branches of the Tree, is the purest and fairest, and comes forth in a chrystalline Liquor, beginning to distil in June, forming itself into Tears bigger or lesser, as the Part of the Tree is more or less full of it; this is gather'd the next Day

Day after it is distill'd forth, for in that Space of Time it hardens by little and little, and becomes white; this, if it shou'd meet with Rain and Wet, will melt and come to nothing. They take the Bark from it with a thin pointed Knife, putting it into glazed Earthen Pots or Pans, then spreading it upon white Paper, they expose it to the Sun, 'till it ceases to stick to the Fingers, lest it shou'd dissolve by Addition of any superfluous Moisture, and lose its Whiteness: This gathering continues about six Weeks.

The next Kind of *Manna* is that which is forced, which is drawn forth when the former *Manna* ceases to flow voluntarily: They wound the Bark of the Trunk to the Wood itself, with sharp Instruments, and so from Noon 'till Evening you will see the *Manna* flow from those Wounds, which is sometimes clotted together at the Bottom of the Tree, like little Sticks of Wax. This they gather the next Day after the wounding, and it is yellower than the former, and therefore not so much esteem'd, being apt to grow brown if kept any Time, yet nothing less purgative.

Thirdly, There is a *Manna* of the Leaf; this flows voluntarily from the Leaf or Leaves of the Ash, like little Drops of Water, and appears in the Nature of a Sweat upon the nervous Part of the Leaf, during the Heat of the Day, and extends itself all over the Leaf; but the Drops are bigger at the Stalk, than at the End or Point of the Leaf, and harden and become white in the Sun as the former, being something larger than Grains of Wheat. In *August* the great Leaves of the Ash will be so loaden with these Drops, as if they were cover'd with Snow: This is as purgative as any of the rest.

Manna is an excellent Purge for Children, and others that are of weak Constitutions, and abound with sharp salt Humours; it is temperate, inclining to Heat, mollifies or softens the Throat and Windpipe, opens Obstructions of the Breast, Lungs, and other Bowels, purges watry Humours, and keeps the Belly soluble; being an excellent Thing for such as are apt to be costive. *Hoffman* says, it ought not to be given crude, but boil'd, not being less flatulent than Cassia, and therefore shou'd not be administer'd without Correctives.

There is a Spirit of *Manna*, made by Distillation in a Retort. *M. Charas's* Spirit of *Manna* is prepar'd thus: Put *Manna* into a Retort, filling it two Parts in three full, distil in Sand; first, with a gentle Fire, then increasing by Degrees; distil to Dryness, cohobate the Liquor, and repeat the Distillation, so will you have a spirituous Water, containing all the best of the *Manna*, which is not only an excellent Sudorifick, but a wonderful Specifick against all Sorts of Agues or

intermitting Fevers, giving it at the Beginning of the Fit; Dose two Drams or more in Carduus Water. *Schröder's* Spirit of *Manna* is thus made: Dissolve *Manna* in *May Dew*, and cohobate 'till it sublimes to the Head of the Alembick, like Snow; so the Mercury of the *Manna* being brought to the fluid Nature of a Spirit, becomes a Solutive for Minerals: But this I dare not affirm for a Truth, never having seen it tried.

3. Of Briançon Manna.

THE *Manna* of *Briançon* is a white dry *Manna*; but as it is of no Use, and little of it is sold, I shall therefore not dwell long upon this Subject. This *Manna* flows from the large Branches of the *Larix* or *Larch-Tree*, for which Reason it is call'd *Manna Laricæa*, and it is met with plentifully in the Hills of *Dauphiny*, especially about *Briançon*, from whence it takes its Name.

Besides the *Briançon Manna*, there are other Sorts; the scarcest and most valuable of which is the *Mastich Manna*, from the *Levant*, or that of *Syria*: This is a *Manna*, which in Colour comes near that of *Calabria*, and is in Grains like *Mastich*, whence it was so call'd; this flows from the *Cedars* of *Lebanon*.

This *Manna* is very scarce in *France*; though I have about three Ounces, which was affirm'd to me to be true, which is of the Colour and Figure already described, of a bitter and unpleasant Taste, which is very different from *Fuchs's* Account, who says, the Peasants of Mount *Lebanon* eat it. This Variety of Tastes probably proceeds from its Age, or the Change of the Climate: The People of *Mexico* have a Kind of *Manna* which they eat as we do Bread; and there is a Kind of *Manna* which the *Africans* have in constant Use instead of Sugar or Honey.

There is also a *Persian* Kind in large Lumps; but as none of them ever come to us, it wou'd be but unnecessary to write any Thing more about them.

4. Of Liquid Manna.

THE *Liquid Manna*, or *Tereniabin*, is a white *Manna* that is glewy like white Honey; it is met with upon certain Plants, garnish'd with Leaves of a whitish green, and beset with reddish Thorns; the Flowers are also reddish, and are followed by Pods like those of the *Colutea*, or Bladder Sena: It grows plentifully in *Persia*, and about *Aleppo* and *Grand Cairo*, whither it is brought in Pots, and sold to the Inhabitants, who use it as we do *Calabrian Manna*.

This

This Liquor is very rare in *France*. In the Year 1683, a Friend of mine, who had been in *Turky*, made me a Present of about four Ounces, which I keep to this Day; and which was, when given me, according to the Description I have made of it; but as Time destroys all Things, the Colour is chang'd to a grey, and it is become a Syrup of a good Consistence, and of a reddish brown; and that which is most remarkable is, that the Taste is sweet, Sugar-like, and pleasant, and that it is not turn'd sharp.

There is met with, besides, in the *Asia major*, upon several Trees like the Oak, a *Liquid Manna*, especially near *Ormus*, whence it is brought into the Towns in Goat-Skins, where they make so considerable a Trade of it as to transport it to *Goa*: This *Manna* is of the same Figure and Colour with the former, but it will not keep so long.

Manna is a white or yellowish concrete Juice, which inclines much to the Nature of Sugar or Honey, melting or dissolving easily in Water, of a sweet Honey-taste, and a faint weak Smell; it flows either with Incision or without, in the Nature of a Gum, from the large Branches and Leaves of the Ash-Tree, both wild and cultivated.

The finest and most pure *Manna* flows without Incision in *June* and *July*, when the Sun is the hottest; it drops in crystalline or fine transparent Tears, almost like Gum Mastich, some larger and some less, according to the Nature of the Soil, and the Trees that it grows upon. In a Day's Time it hardens by the Heat, and grows white, unless it happens to rain that Day, for then it is all spoil'd; they take it from the Place when it is condensed, and dry it in the Sun again, to render it whiter and fitter for Carriage.

The second Sort of *Manna* is taken from the same Trees in *August* and *September*. When the Heat of the Sun begins to decrease, then they make Incisions into the Bark of the Ash-Trees, and there flows a Juice which condenses into *Manna*, as the first Sort; there runs a greater Quantity than the first, but it is yellower and less pure; they remove it from the Tree and dry it in the Sun. In rainy or dripping Years they make very little *Manna* from the Trees; because it liquifies and spoils by the Wet, which is the Reason that some Years the *Manna* is dearer than others.

When *Manna* is kept it loses much of its Beauty, and does not lose a little of its Virtue. Several People believe that the older it is the more purgative it grows, which I cannot at all understand, and therefore advise you not to use the red or brown decay'd and soft *Manna*, which

sometimes you meet with at the Druggists, but take the purest you can meet with. It is a gentle Purger, and proper for the Head, from an Ounce to two Ounces. The Word *Manna* comes from the *Hebrew* Word *Man*, which signifies a Kind of Bread, or something to eat; for it has been receiv'd among the Antients, that the *Manna* was a Dew of the Air, condensed upon certain *Galabrian* Plants, resembling that which God rained down upon the *Israelites* in the Desert for Food.

[*Manna* is the condensed Juice of the *Fraxinus rotundior folio*. C. B. Pin. 416. *Fraxinus Alepensis*. Herm. Cat. Lugd. Bat. 261. It grows plentifully in *Calabria* and *Italy*.

Beside what has been already mention'd to prove that *Manna* is not a Dew, as had been believ'd for many Ages, the greatest Proof of all that is not so, is, that all Dews melt in the Sun, whereas *Manna* is very well known to dry and harden by its Heat.

The *Arabians* were the first who discover'd this Medicine; it was unknown to the antient *Greeks* and *Romans*.]

5. Of Gamboge, or Gum Gutta.

GUM Gutta, or Gutta Gamba, *Gamboge*, *Gamandra*, or the *Peruvian Pomet*. Gum, is a Gum that flows from the Trunk of a creeping Plant, that is of a particular Nature; it has neither Leaves, nor Flower nor Fruit; and produces nothing but a Quantity of prickly or thorny Branches, which arise one among another, according to the Figure represented in the Plate: Or else, according to an Account I have receiv'd since the first Publication of this Work, from a *Chinese Tree*, call'd by the *Indians*, *Codelampulli*, or *Cantopuli*, which bears reddish Apples, of a nauseous sour Taste, and without Smell. The Gum is gather'd from the wounded Bark of the Tree, and the *Indians* afterwards dissolve it, and form it into Cakes, as we receive it.

The People of *Siam*, and the adjacent Countries, cut the thick Trunk of the Plant, from whence proceeds an insipidate milky Juice, of a moderate Consistence, which after it is left some Time in the Air, thickens and grows yellow, and then the People roll it up like Paste, and afterwards make it into Cakes, as we have it brought to us. The Peasants about *Odia*, or *On-dia*, the Capital of *Siam*, bring it to Market to sell.

It is most commonly brought into *Europe* from *Peru* and *China*, and other Places of the *East*; being of a pure fine Body like Aloes, but of the Colour of the finest Turmerick, being a good yellow, inclining to an Orange-Colour, without Rubbish.





Gum Arabick.



Gum Senega.



G. Traganth.

Rubbish or Filth in it, fine and clean in round Rolls or Cakes, and easily dissolving in Water, being almost all of it Tincture. That it abounds with Sulphur plainly appears, not only by the chymical Resolution of it, whereby a large Quantity of Oil is extracted from it, but also from that bloody Colour, which the Solution acquires, when Lime-Water is pour'd upon it; seeing the very same Colour will be produced in Lime-Water, if you boil common Sulphur or Brimstone along with it; and that *Gum Gutta* is not altogether destitute of a pungent or sharp Salt, manifestly appears by its producing a greenish Colour, upon the blue Paper.

Gamboge ought to be chosen of a bright yellow Colour, a little inclining to red, clean and free from Sand, and which being chew'd, dyes the Spittle of a yellow Colour, and being held to the Flame of a Candle is apt to take Fire. It is prescrib'd crude or unprepar'd, from three Grains to six or ten; but it will do better in a Magistery, as follows: Take what Quantity you please of *Gamboge*, dissolve it in Spirit of Wine tartariz'd, then pouring Water upon it, a Powder of a noble yellow Colour will precipitate or fall to the Bottom: This is given from six to ten Grains by itself, or in an Ounce of Pulp of Cassia for a Bolus. Others dissolve it in Vinegar, or Spirit of Sulphur or Vitriol, and so make an Extract. *Gum Gutta* is used in the Catholick Extract of *Sennertus*, in the Cholagogue Extract of *Rolfinchius*, in the Hydropick Pills of *Bontius*, in the Hydragogick Electuary of *M. Charas*. Lastly, the Pills of *Gutta Gamandra* of the *London Dispensatory*, borrow their Names from it.

This was, doubtless, the Gum *Monardus* used against the Gout: It both vomits and purges admirably, carries off watry Humours, and is chiefly used against Dropsies, Cachexia's, Gouts, Scabs and Itch. *Rolfinchius* says, it suffices to give this Gum crude, being finely powder'd, and sprinkled with Spirit or Oil of Anniseed, and so dry'd again. It is an incomparable and beneficial Cathartick for purging serous and watry Humours, and may be given to a Scruple in Substance in strong Constitutions.

There is a yellow staining Colour to wash Maps and Pictures with, made of this *Gamboge*. Put into Water enough to dissolve it, it makes a good Colour for Pen or Pencil; if you add a little Gum Arabick it will be so much the better; being dissolv'd likewise in clear Spring Water, it yields a very beautiful and transparant yellow, especially with the Addition of a little Alum to it, which will both brighten and strengthen the Colour.

Gummi Gutta, Gutta Gamba, Gutta Gamandra, &c. or *Gamboge*, is a resinous Gum brought us from *India* in large Rolls or Cakes that are hard, but brittle and extremely yellow: The Gum flows by Incision from a Sort of thorny creeping Shrub, that runs up a-height, and winds itself about any neighbouring Trees: The Trunk of it is thicker than a Man's Arm; and the *Indians* by cutting of it, get a Juice, which being of the Consistence of a Paste, they mould into what Form they please. Some Authors hold that the Plant which produces this Gum, is a Kind of *Lathyri*, and that the Leaves are as thick as those of the greater Houseleek. It ought to be chosen dry, hard, brittle, clean, and of a deep Colour: It purges strongly upwards and downwards, and ignorant People should not be too busy with it.

[*Pomet's* later Account of this Gum was right, for the Tree which produces it, is the *Carcapuli*. Park. Theat. 1635. *Carcapuli Acostæ, fructu malo aureo simili*. Pluk. Alm. 81. *Coddam-Pulli seu Ota Pulli*. Hort. Mal. 1. 41.

There have been various wrong Opinions among Authors about the Origin of this Gum, some thinking it the Juice of a Kind of Spurge, and others of a *Scammony*; others also have thought it fictitious, and colour'd with Turmeric; but it is now certainly known to be the pure and natural Juice of that Tree.

There is indeed another Kind of *Gamboge* gather'd from an *Indian* Plant of the *Esula* Kind, and call'd *Lonam Cambodia*; but the only *Gamboge* now brought to us is the Juice of the Tree here mention'd.

It is remarkable that tho' this Gum is so violent a Medicine, the Fruit of the Tree has no sensible Quality, but may be eaten as an Apple or an Orange.]

6. Of Gum-Arabick.

THE *Gum-Arabick, Theban, Babylonish*, or the *Egyptian Acacia Gum*, *Pomet.* which is the Name of the Tree which produces it, is a whitish, transparent Gum, which flows from little Trees that are very prickly, whose Leaves are so small, that it is difficult to count them; and that grow in the happy *Arabia*, from whence it is call'd the *Arabian Gum*. This is brought to *France* by the Way of *Marseilles*: But since the *Gum Senega* has been brought us, the true *Gum Arabick* is become so scarce at *Paris*, that one can hardly meet with any.

Chuse such as is white, clear, transparent, and the dryest and largest Drops that can be got, especially for the *Theriaca*. This Gum is used

with good Success for several Infirmities of the Lungs, and to soften the Sharpness of Coughs; Gum Senega is often substituted for it, and several People make it the Basis of what they call the Liquorice Juice of *Blois*. It is of the *Moors* that we buy it, who gather it in the Defarts of *Lybia*, where it runs from the Trees that produce it, as our Cherry and Plumb Tree Gums do from them.

Gummi, Arabicum, Thebaicum, Babylonicum, Aebantinum, Saracenicum, is a Gum that is brought to us in large Tears, or white Pieces, inclining sometimes towards a yellow, clear, transparent, and glewy in the Mouth, without manifest Taste: It flows by Incision from a thorny Tree, call'd *Acacia*. This is a noble Tree growing in *Egypt*, and cultivated in several Gardens of *Europe*, having Sprigs and spreading Roots, and a Trunk rising six Fathom Height, solid, full of Branches and Boughs, arm'd with strong and stiff Thorns or Prickles; the Leaves are small and fine, growing by Couples on each Side of a Nerve or Rib, that is two Inches long: The Thorns or Prickles are of a bright green Colour, a quarter of an Inch long, and the twelfth Part of an Inch broad; out of whose Wings the Flowers come forth in round Heads, resting upon a Foot-stalk an Inch long; they are of a golden Colour, single-leav'd, of a fragrant Smell; and from a small narrow Pipe, enlarging themselves to a wide-mouth'd Cup with five Notches, adorn'd in the middle with a numerous Train of Threads, or small Chives, and a Colour inclining to a reddish, two Inches long, and bending or crooking, after the Manner of a Bow, in whose Cavity are several Partitions, distinguish'd with fungous or spongy Membranes, of a whitish Colour, containing Seeds that are of an oval Figure, flat and hard.

The greatest Part of the Gum we call *Arabick*, that is in the Druggists Shops, comes not from *Arabia*, but is only a Gum that is like it in Figure and Property, that is brought from *Senega*, or rather a Collection of several aqueous Gums, found upon several Sorts of Trees, as Plums, Cherries, &c. all which are in some Measure, pectoral, moistening; cooling, agglutinating and sweetening; proper for Rheums, Inflammations of the Eyes, Looseness, &c. The true Gum *Arabick* falls by little and little from the Trees, especially in Time of Rain; and agglutinates or sticks together in large Pieces, that are fine, clear, white and transparent; and this is call'd Gum *Turick* that is used by the Silk Dyers.

[The true Gum *Arabick* is the Product of the *Acacia vera*. Rai. Hist. 1. 976. *Acacia vera Aegyptiaca Siliquis Sinuatis sive Lupini*. Breyn.

Prodr. 2. 2. *Acacia foliis Scorpiordis Leguminosæ*. C. B. Pin. 392.

But there is indiscriminately brought over with this, the Gum of the *Acacia Indica Farnesiana*. Ald. 2. Rai. Hist. 1. 977. *Acacia Indica siliqua tumida tuberosa*. Breyn. Prod. 2. 2. The Gums of both these Species are much of the same Nature, but they differ something in Form and Colour, that from the true *Acacia* being in thicker Drops, and something yellowish, and that from the *Farnesian* slenderer, and perfectly white.

7. Of Turick Gum.

THE *Turick*, or *Turis Gum*, is no other than the true Gum-*Arabick*, fallen from the Trees in a rainy Season and mass'd together; which is brought from *Marseilles* in great Lumps, that weigh sometimes more than five hundred Weight a-piece, which happens from their close Stowage in the Ships that bring 'em over. Chuse the dry, clean, bright and transparent Gum, and the whitest you can get: This Gum is much used by the Silk Dyers.

8. Of the Vermicular Gum.

THE *Vermicular*, or Worm-like Gum, is the Gum *Arabick* or *Senega*, which falling from the Trees twisted, remains in the Figure or Shape of a Worm, from whence it takes its Name. Chuse the white, clear, and transparent, in little Windings; the dry and true *Arabick*, especially for the Treacle, which is the principal Intention of it.

9. Of English Gum.

THE *English Gum* is a white *Arabick*, or *Senega*, dissolv'd in a little Water, and reduced into the Form of Paste, after having spread it upon a Stone oil'd, of what Thickness they please, and then leaving it to dry a little; that is to say, to the Consistence of *Flanders Glue*; after that they cut it as they please, and dry it. This Gum is made to curl Hair, and upon that Account is call'd the curling and *English Gum*, because the *English* first made it.

10. Of Gum-Senega.

THE *Senega Gum*, which we frequently call Gum-*Arabick*, and which is sold at this Time in our Shops for it, is a Gum which flows from the Trunk and large Branches of Trees, furnish'd with Thorns and very small green Leaves, and white

white Flowers, from whence arise round and yellow Fruit resembling Figs. These Trees grow plentifully in several Parts of *Africa*, in *Guinea*, &c. from whence this Gum is brought from *Senega* by the Blacks, or the white Men, that come from the Mountains, and who carry it on their Back, or on Camels, in Panniers made of Palm-Leaves, to the *French* Establishment at *Senega*, from whence it is sent by the Merchants to several Ports of *France*.

[The Gum *Senica*, or *Senega*, is brought to us in large Pieces; it is a Kind of Gum *Arabick*, and drops from another Species of the same Tree. The *Acacia Siliquis Compressis*. Ind. Med. 57. It is much of the Nature of Gum *Arabick*; and commonly what we buy for Gum *Arabick*, is this Gum broken into small Pieces.]

11. Of the Country Gum.

THIS is such as the Peasants bring to *Paris*, which they gather from their Fruit-Trees, as Plums and Cherries, that come forth from the Trees in the same Manner with the former, and are so much like some of them in Colour, Form, Substance and Nature, that they are not to be known asunder; so that many People believe that they are all but one and the same thing, however they have all one and the same Quality and Operation, and are used to cure Coughs, Colds, Catarrhs, Hoarseness, Shortness of Breath, &c. Chuse it as dry and clean as may be.

[This is bought up by our Druggists, who mix it among what they call their Gum *Arabick*.]

12. Of Gum-*Tragacanth*.

THIS Gum, which we usually call *Pomct*. *Traganth*, or *Tragacanth*, is a white curled Gum made like little Worms, of an insipid mucilaginous Taste. The Shrub which produces it, is small and prickly, supply'd with very little Leaves of a whitish Green, which the People of *Marseilles* call *Fox-Beard*, or *Goat's-Thorn*. This Gum flows by the cutting of the Trunk, and the thick Roots of these little Shrubs; they are numerous in *Syria*, especially about *Aleppo*.

This Shrub has Roots, according to *J. Bauhinus*, that dive deeply into the Ground, spriggy, and of a brown Colour, sending forth several Twigs, running and spreading along the Surface of the Earth, in a round Figure or Circle, with coupled Leaves growing upon a Rib, ending in a sharp Thorn or Prickle. They are of a roundish Shape, of a whitish Colour, and soft. The Flowers are papilionaceous, of a whitish Colour,

inclining to a blue, and running together in round Heads; unto which succeed Cods, that are cover'd with white Hairs, and distinguish'd into two Apartments, in which are contain'd Seeds of the Shape of a Kidney. There is nothing that grows more frequently upon the Sea Coast, about *Marseilles*, and upon *Harper's Point* or *Cape*, nigh *Toulon*, than this Thorn. This Gum issues out of the wounded Roots of this Thorn, running together in Lumps of different Sizes, some bigger and some less; some very clean and clear like *Ising-Glass*; others again looking more blackish and foul: Both this and Gum-*Arabick* thicken the Humours, and moisten; but they are chiefly used for the Incorporation of Powders, and are dissolv'd in *Rose-Water*, and the like, and a Mucilage extracted thence.

Tragacanthum, or *Dragacanthum* Gum-*Traganth*, is a white, shining, *Lemery*. light Gum, in little long Pieces, slender and curled, or winding, in the Nature of Worms: They get it by Incision from the Root and Trunk of a little Shrub, call'd by the same Name *Tragacantha*, or *Spina Hirci*, *Goat's-Thorn*: It bears several hard Branches, cover'd with Wool, and furnish'd with white Thorns, and very small thin Leaves, rang'd in Pairs, and ending in a whitish Thorn. The Flowers grow on the Tops of the Branches, join'd several together; they are leguminous, and like those of the little Broom, but white. After they are gone succeed Pods, divided each into two Partitions, full of Seeds, the Size of that of Mustard, and the Shape of a little Kidney: The Root is long, and stretches wide; it is as thick as one's Finger, white and woody.

[The Shrub which produces this is the *Tragacantha vera*. *Perk.* 995. *Astragalus Auleatus fructicosus*, *Massiliensis Tragacantha dictus*. It is kept in the Gardens of the Curious, and flowers in *June*.

The *Poterium* is another Species of this Shrub. It is the *Tragacantha Granatensis foliis incanis deciduis flore albo*. *Hist. Ox.* 2. 113. *Tragacantha altera seu minor Poterion forte Dioscoridis*. *Park.* 996. The Root of this was once esteem'd good in Nervous Cases, but at present is never seen in the Shops, or heard of in Practice.]

13. Of Camphire.

Camphire is a resinous and very combustible Gum, of a penetrating *Pomct*. Smell, and easy to dissipate into the Air, because of the Sulphur and volatile Salt, of which it is compos'd. It flows from the Trunk and large Branches of great Trees, that

have Leaves like those represented in the Figure hereof, whose Original is in my Hands, given to me by Mr. *Tournefort*: These Trees grow plentifully in the Isle of *Borneo*, and other Parts of *Asia*, and in *China*.

The Inhabitants of the Places where these Trees grow, cut the Trunks, from whence flows a white Gum, which is found at the Foot of the Tree in little Cakes, and which is brought into *Holland* to be refin'd. This Gum, as it comes from the Tree, and as it comes out of the Country, is call'd *Rough Camphire*; which, to have its requisite Quality, ought to be in brittle Pieces; and being broken should be like white Salt, of the Smell mention'd before, the driest and least impure that may be.

This rough or unrefin'd *Camphire* is sometimes to be met with at *Rouen* and *Paris*, from whence it is sent to *Holland* to be refin'd, because no Body else will take the Pains or Trouble to do it but the *Hollanders*. I wonder what all our Chymists have thought on, that they never yet have inserted into their Books the Manner and Way of refining *Camphire*: Yet nevertheless some believe that the *Camphire* we sell is just as it is drop'd from the Tree, which is wide of the Truth; since the rough *Camphire*, as it comes from the Tree, is in Pieces of different Sizes, and like white Salt that is very dirty; and that we sell is in Cakes made in cover'd Pots, white, clear, and transparent; which lets us understand it has been work'd, and could not come so from the Tree: And for the Satisfaction of the Publick, I will lay down the Manner of refining it, which was never told me by any Person, but as I discovered it by Experience, by which I have learn'd that,

They refine or purify rough *Camphire* by putting it into a Matrafs, or other subliming Vessel, after it is pounded, and after half the Vessel is fill'd with the Powder, they stop it lightly; then they place it upon a gentle Fire, and presently the more subtil Parts of the *Camphire* rise and cling to the Top of the Vessel; and when all is sublimed, they find it fine, white, transparent, and thick, according to the Quality of the unrefined *Camphire* that was employ'd. After Sublimation they meet with a *Caput Mortuum* at the Bottom of the Vessel that is of no Value. There adheres to the refin'd *Camphire* a *Camphire* that is extremely white, and all in little Grains, which is likely what would not incorporate as the other. As the rough *Camphire* therefore is common enough among us, I know no Necessity we lie under, to let it all pass thro' the Hands of the *Dutch*, to make it either useful for Medicine, or other Purposes; as Fireworks, or the like. As

to its Virtues, Mr. *Lemery* says, the Oil is very valuable for the Cure of Fevers, a Piece of Scarlet Cloth which has been dipt into it, being hung about the Neck. This Oil is made by the Assistance of Spirit of *Nitre*, that makes it of an Amber Colour; and this is wonderfully recommended in Pains, and where the Bones are carious.

Other Authors are of Opinion, that the *Camphire* of the Shops, is obtain'd from a Tree that rises the Height of a Man, furnish'd with a Number of Branches and Boughs, spreading far abroad, and bearing Leaves very thick, and close by one another, not much unlike the Leaves of the common Bay-Tree, bright, smooth, and somewhat curled and waved about the Edges; of a dark green Colour, a sharp aromack Taste, and of a strong vehement Smell: None as yet has given a perfect Description of the Flowers of this Tree; yet it is certain that a Fruit succeeds to the Flowers coming out of a longish Cup: Within this Fruit is enclosed a round Shell of a blackish Colour, inclining to a brown, not very hard, containing a fourish Kernel, cloven in two, being fat, of a biting aromack Taste, but not unpalatable. This Tree grows plentifully in the Country of *Japan*. *Camphire* is extracted from the Roots of this Tree; they cut the Roots into small Pieces, and throwing them into a Brass Kettle, they cover it with a Lid that is broad at the Bottom, and tapering, sharp or narrow at the Top, like the Head of an *Alembick*, and putting the Kettle over the Fire, that volatile Salt, the *Camphire*, ascends and cleaves to the Cover or Lid. This *Camphire*, at first, is of a sordid whitish Colour, and very foul; but after the *Hollanders* have refin'd it by the Help of Fire and Glafs Vessels, it is so order'd and elaborated, that it becomes transparent.

Some say that *Camphire* sometimes flows naturally or spontaneously from these Trees, or else by making deep Incisions into them; but the best *Camphire* is drawn from the Roots of the *Cinnamon-Tree*, as others aver: Chuse such as is white, transparent, brittle, dry, of a biting pungent Taste, and that smells like Rosemary, but much stronger: It is a true oleaginous volatile Salt, abounding with Sulphur, whence it easily dissolves in Water and Spirit of Wine. This Medicine provokes the Courses, and assists wonderfully in Suffocations of the Womb: Besides its Faculty of subduing Hysterick Distempers, it is also anodyne, procures Sleep, and resists Putrefaction; upon which Account it is often prescrib'd in malignant Fevers, and after the Use of Emetics, to refresh and restore the fainting and drooping Spirits. Spirit of Wine camphorated, may be taken inwardly

14



Benjamin.

15



*The Storax Tree y^e creeps upon
y^e Wall.*

20



Myrrh.



Asafetida

wardly to a Spoonful, and outwardly it powerfully resolves, diffuses, and not only prevents, but also cures a Gangrene. An Oil is prepar'd from it besides that mention'd, by dissolving it in the highly rectify'd Spirit of Turpentine, which is an efficacious Medicine against Rheumatism, Sciatica, or Hip-Gout: It is used in the white Troches of *Rhases*, the Ointment of *Cerusse*, in the red desiccative Ointment, in the Cerate of *Sanders*, the Styptick Plaister of *Paracelsus*, &c.

Camphora seu Caphura, or *Camphire*, *Lemery*. is a Kind of white light Rosin, that is very volatile, combustible, of a strong penetrating Smell, that flows from the Trunk and large Branches of a Tree resembling the Cherry Tree, that grows in the Isle of *Borneo*, and in *China*: This *Camphire* is found at the Root of the Tree, where it is form'd into Pieces or Lumps of different Sizes, which is call'd rough or unrefin'd *Camphire*; this is refin'd by subliming it over a gentle Fire, as hath been already hinted.

There are some who affirm the *Camphire* to be a Gum that distils Drop by Drop, from a great Tree much like a Walnut-Tree in *China*, and in the Islands of *Japan*, *Java*, *Borneo*; from which last Place, the best is said to come, and other Parts of the *East-Indies*, from whence it is brought to us in *Duppers*, and Cakes unrefin'd; which when purified, is of a white Crystalline Colour and a strong odoriferous Smell, volatile in Quality, and ready to dissolve in oily and spirituous Bodies: Being set on Fire, it is almost unextinguishable, burning not only in the Air, but Water, and therefore is a proper Ingredient for all Sorts of Wild-Fire.

That which is brought out of *China*, is in little Cakes, but is not accounted so good as the *Bornean*. It is so very subtil and volatile, that it is difficult to keep it from losing itself even in Quantity and Substance, unless it be close stopp'd up in Glass Bottles: This is an excellent Remedy for Hysterick Fits and Vapours, being sinell'd to, used Clysterwise and given inwardly from three Grains to six in any convenient Vehicle; it is also good in continual and intermitting Fevers, whether Putrid, Malignant or Pestilential, being given inwardly, or hung about the Neck; because being of such subtil Parts, it insensibly enters into the Pores, and causes a Rarefaction and Perspiration.

There are several Preparations of *Camphire*, but not one of them exceeds the pure Substance itself, or a bare Dissolution of it, because of the Purity and Fineness of its own Body: As the Oil, simple and compound, the essential Spirit, the *Camphire* terebinthinated, Troches, and the

like, which rather debase than exalt this noble Medicine to a higher Pitch of Excellency: It is certain this abates Lust, resists Inflammations, and prevents Gangrene; the two first of which are apparent from the great Power this has to overcome the Force of the *Cantharides* inwardly taken, and to render them so far from being dangerous, that they become the most efficacious Remedy in Practice.

[The *Camphire* we see in *Europe*, comes either from *Japan*, or from *Sumatra* and *Borneo*; the Tree which produces the *Japan Camphire*, is the *Laurus Camphorifera*. Kæmp. Am. Ex. 770. *Arbor Camphorifera Japonica foliis laurinis, fructu parvo globoso calyce brevissimo*. Breyn. Prod. 16.

That which produces the *Sumatra* and *Borneo Camphire*, is the *Arbor Camphorifera Sumatrana Grimmii*. Rai. Hist. 2. 1679. *Camphorifera Sumatrana foliis Caryophylli Aromatici longius mucronatis, fructu majore, oblongo, Calyce Amplissimo, Tulipæ figuram quæd ammodo repræsentante*. Breyn. Prod. 2. 16.

The *Borneo Camphire* is much more valuable than that of *Japan* or *Sumatra*, but as those are cheaper, we have very little of the *Borneo* Kind brought into *Europe*.

There is a more precious *Camphire* than either of these, which comes from the Roots of the Cinnamon Trees in the Island of *Ceylon*; but this we never see.

The *Camphir* is got by distilling the Roots of these Trees with Water, in an Alembick with a Head made of twisted and platted Straw; all the Humidity evaporates thro' the Head, and the *Camphir* sticks to it. It is in this State of a greyish Colour, but after refining by Sublimation in a Sand Heat, it becomes white and transparent.

Taken inwardly, it is cordial, sudorifick, and anodyne, and used externally a powerful Discutient. The Antients believ'd it an Enemy to Generation, but that was wholly a Mistake.]

14. Of Benjamin.

THIS is a Gum that flows from the Trunk and large Branches of a *Pomer*. great Tree, by Incision, which grows plentifully in *Cochinchina*, chiefly in the Forests of the Kingdom of *Lao* and *Siam*; from whence the Attendants of the Embassadors of *Siam* brought a great Quantity to *Paris*, where it was sold at a good Price.

We have two Sorts of *Benjamin*, that in Tears and that in the Lump: Chuse that in Tears, of a golden Yellow without, and White within, with reddish and whitish clear Veins; brittle, without Taste, but of a sweet, agreeable, aromatick sinell.

This

This Description of *Benjamin* will not fail to surprize those who have never seen *Benjamin* as it comes from the Tree, and sticks to the Bark, having seen no other at *Paris*, but a Quantity of other Kinds of *Benjamin*; the first of which is that we call the *Benjamin* in the Tear, though it is in a gross Mass, which is usually clear and transparent, of a reddish Colour, mix'd with white Spots, as Almonds that are beat; whence it is called the *Amygdaloides*, or Almond *Benjamin*; this is the best Sort, and is said to come from *Sidon*, and *Samaria*; but that which is brought to us comes from the *East-Indies*, from *Sumatra*, and *Siam*, *Malabar*, *Surat*, and *Java*.

The second is the greyish, call'd *Benjamin* in Sorts, which if good, ought to be clean, of a good Smell, full of white Bits or Spots, as resinous and little loaded with Filth as may be; but have nothing to do with the Black, which is earthy, and full of Dross; and beware of the Artifice of having them all mix'd together, that they may sell the better. This Gum was not formerly used inwardly, either by the *Indians* or *Europeans*; but since Chymical Physick has been in Vogue, the following Preparations are made from it, a Tincture, Magistery, Flowers, Crystals, and Oil. The Flowers, according to *Lemery*, are made by putting the *Benjamin* into an earthen Pot, covering it with a Cone of Paper, and tying it round about under the Border; then setting it into hot Ashes or Sand; and, when the *Benjamin* is heated, the Flowers will ascend. Shift the Cone, and sweep off the Flowers every Hour or two, and keep them in a Bottle close stopp'd. Note, That *Benjamin* being very full of volatile Particles, easily sublimes over the smallest Fire, and the Flowers ascend in little Needles, very white; but if you give never so little Fire more than you should do, they carry along with them some of the Oil, which will make them yellow and impure; you must therefore perform the Operation gently to have the Flowers fair, which will have a very pleasant Flavour and Acidity.

These Flowers are, without doubt, the most essential Part of the *Benjamin*, whose principal Virtues are as well to subtilize bad Humours and expel them through the Pores of the Skin, as to loosen and expel the thick and viscous by the ordinary Ways, chiefly those of the Breast and Lungs: Dose from three Grains to ten in any proper Liquor. They are profitable in vehement Catarrhs, Coughs, Colds, Asthmas, and Obstructions of the Lungs; procure Sweat excellently in venereal Cures, given in a Decoction of *Guajacum*, and fortify a weak Stomach. From these Flowers a Tincture is likewise extracted with Spirit of Wine tartarized, whose sulphureous Parts have a

good Agreement with the volatile Salt of the *Benjamin*; so that this Spirit not only extracts a Tincture from the Flowers, but from the buttery Substance of the Gum, much more pure and subtil, and which will work in less Quantity than the Tincture drawn out of the crude or gross *Benjamin*.

Benzoinum officinarum, *Ben Judæum*, or *Asa dulcis*, the *Benjamin* of the *Lemery*. Shops, is a resinous Substance, running together in large Lumps or Clots, being bright, shining, of a brown Colour, brittle, and easily crumbled into Bits, adorn'd with several white Flakes or Specks, like the inner Substance of Almonds, inflammable and odoriferous.

Benjamin is most esteem'd when it is very clear, and almost transparent, of a light brown Colour, inclining to red, and plentifully furnish'd with white Flakes; that which is black is not so much valued: This is brought from the *East-Indies*, but more particularly from *Sumatra* and the Kingdom of *Siam*. The *Benjamin Tree* is large, tall, and beautiful, as *Garcius ab Horta* relates, bearing Leaves like the Citron, or Lemon Tree, but smaller, and not shining so much, being whitish upon their under Side.

A Tree bearing the Leaves of the Citron or Lemon Tree, and dropping *Benjamin*, which seems to answer the Description of *Garcius*, was not many Years ago sent out of *Virginia*, by Mr. *Banister*, to the Right Reverend *Henry Lord Bishop of London*, which grows now in the Royal Garden at *Paris*, being the Gift of the aforesaid Bishop. It flowers in the Beginning of the Spring, but has not produced any Fruit as yet. *Benjamin* promotes Expectoration, and is of great Force and prevalency in the Asthma, or Stoppage of the Lungs, and a lingering phthisical Cough; but chiefly the Flowers of it, which being fresh and new made, may be given from six Grains to twelve: They are likewise endued with a Virtue to provoke Urine and Perspiration, and the following is admirable in a Pleurisy. Take *Carduus*, and red Poppy Water, of each three Ounces; Flowers of *Benjamin*, ten Grains; of the Oil of Cinnamon, two Drops; Syrup of red Poppies, one Ounce; make a Potion to be repeated according to the Nature of the Disease, twice or thrice in twenty-four Hours.

[The Tree which produces the *Benjamin* is the *Arbor Virginiana Pijaminis folio baccata Benzoinum redolens*, Pluk. Alm. 42. *Arbor Benzoinifera*, Brey. Prodr. 2. 16. *Arbor Benzoini Grimmeri*, Ephem. Germ. A. 11. 376. F. 31. It grows both in the *East* and *West Indies*. We have the *Benjamin* from the *Philippine Islands*, from *Siam* and *Sumatra*.

We have three Kinds of *Benjamin* in the Shops; the *Amygdaloides*, which is reddish, with white Specks; the Grey, and the Black: The first we have from *Siam*, the second from *Java* and *Sumatra*, and the last from *Sumatra* only.

There is beside this Difference in that from the same Tree; that Part of it is white and yellow, and perfectly fine, and Part brownish, dark and dirty.

Benjamin was unknown to the ancient *Greeks* and *Arabians*; and there were many Disputes among the later Writers about the Tree that produced it, before the Truth was known.]

15. Of Red Storax.

Pomet. THE *Red Storax*, or *Frankincense*, of the *Jews*, which is very common among us, is a Resin, issuing from the Trunk and thick Branches of a Tree that is of no great Height, but whose Leaves resemble those of the Quince Tree, only that they are smaller, and the Fruit is of the Bigness of a Filbert, in which is contain'd a white Kernel that is oily, and of a Smell entirely like the *Storax*; and as the *Storax* is sometimes found in Pieces in the Shells of this Fruit where it has accidentally got in, it gives Occasion to several to believe that the *Storax* runs from these Nuts.

This Gum is brought us by the Way of *Marseilles*, from several Parts of *Syria* and the *Levant*, where those Trees grow plentifully. Chuse that which is in Lumps or Clots, of a red Colour, with some small whitish Lumps interspersed, sweet, and of a fragrant Smell; but reject that which is dry, black, branny, or foul, and smells like the Liquid *Storax*; as also refuse the *Storax* in the Cake or Roll, which is a Composition of Liquid *Storax*, and abundance of other Drugs of little Worth; as also that which is in Dust, being little else but the Saw-Dust of the Wood. *C. Bauhinus* says, the Tree which produces it is about the Bigness of the Olive Tree, and grows in the Woods of *Provence* in *France*, between *St. Magdalen* and *Toulon*: In its Trunk, Bark and Leaves, it resembles the Quince Tree. The Flowers grow upon small Twigs, being not much unlike the Flowers of the Orange Tree; but single leav'd, having their lower Part fistulous, and their upper Part flatt'd like a hollow Cup, and Bell-fashion'd, containing a round globous Pointal, that passes away into a Fruit of the Bigness and Shape of a Filbert Nut, being thick and pulpy; at first of a sweetish Taste, but afterwards turning bitterish, in which is contain'd a Stone that is very hard, including a white Kernel.

16. Of Calamite Storax.

THE *Calamite Storax*, or that in Tear or Grains, which we have from *Marseilles* or *Holland*, is a reddish Mass, full of white Grains or Bits, and sometimes they are separate, that is to say, it is all in Tears, white within and reddish without, of a middling Consistence, and of a sweet fragrant Smell, almost like Balsam of *Peru*. Chuse such as is in separate Tears or small Pieces, and the driest and least sticking to the Fingers that may be.

Storax Calamita is of a resinous Substance, fat, clammy, soft in handling, of a fragrant Smell, and a reddish Colour: The best is that which is in Grains, and with some white Fragments in it, or yellowish, with a very sweet Scent, and that yields like Honey when soften'd. That is worse which is mix'd with Bran, but that which is mix'd with Saw-dust, or is black and mouldy, or without Scent, is worst of all, and naught. *Matthiolus* says, it is a concreted Resin from a Tree, dry and sweet, and is called *Storax Calamita*, from the *Calami*, or *Canes*, in which it was used to be brought from *Pamphylia*.

Mr. *Charas* says, he believes that the *Storax* which is brought to us, and which they pretend to bring out of the *East*, is not the true *Storax*, but a Composition: The high Price at which it has been sold for these many Years, has encouraged the Villainy of those Cheats, and the Trials which he had made thereof had convinced him. It cannot, however, says he, be counterfeited with *Galbanum* or *Ammoniacum*, because of their strong Scent, whereas *Storax* is very pleasing and odoriferous; but doubtless, it may be adulterated with the white Tears of *Benjamin*, or some resinous Gum without Scent, or which may be easily out-scented by the *Storax*: To which Purpose, continues he, I have thought fit to publish what I have experimented, viz. That having *Storax* in Tears by me, whose Smell, Taste, Colour, Form, and Body, were such as are required in the true *Storax*, I undertook to soften one Tear in my Hand, intending to incorporate it afterwards with other Drugs of a like Substance: I was astonish'd when I found all the good Scent of the *Storax* to be left in my Hand, and the same Tear not fit to impart any Scent or Virtue to the aromatick Balsam I was making: Therefore, trusting neither to the *Storax* made up like Bowls, which is encreased with Liquid *Storax*, nor to the other full of Saw-dust, which is sold in the Shops; I chose a *Storax* of a very delicious and fragrant Scent, full of Grains or little Tears, and free from Dirt, out of which I extracted the Gum thus: Take of this
Storax

Storax eight Ounces ; put it into a Pipkin with a Pint of White-Wine ; place it over the Fire, and stir the Whole gently with a *Spatula*, 'till it is sufficiently dissolv'd ; put it out immediately hot in a strong Bag, tie it hard just above the Gum, and press it out between two hot Plates ; so will you have about two Ounces of pure Gum, both fair and fragrant, and every way exceeding all the Sorts of *Storax* in Tears.

It is emollient, digestive, cephalick, neurotick and pectoral ; cures Coughs, Catarrhs, Hoarseness, Heaviness, Barrenness, and Hardness of the Womb : Taken with Turpentine as a Pill, it opens the Belly, and, after an excellent Manner, eases the Pains of the Stone, and takes away all Obstructions of Urine by Sand, Gravel, &c. Outwardly it is vulnerary, discusses Tumours, eases all Sorts of Pains and Aches, and stops Catarrhs, used as a Fume. The Tincture of *Storax* has all the Virtues of the Gum, stops *Gonorrhoeas*, and is said to be a Specifick against Barrenness in Women : It is a Cordial against fainting Fits, and also good in Diseases of the Head, Brain and Nerves. The Pills made up with this Gum and *Chio* Turpentine have all the Virtues of the Gum, stop Gleetings in Men and Women, ease Pain in making Water, and remove all Obstructions of Urine. Dose from a Dram to two Drams. There is an acid Spirit drawn from it, that is aperitive and very penetrating, and the yellow Oil is good against Palsies, Numbness, Convulsions, &c. either inwardly taken to three or four Drops, or outwardly applied to the Part affected. The red Balsam made of the *Storax* has the same Virtues, but is not so subtil and pure, and so is seldom given inwardly.

17. Of Liquid Storax.

Pomet. THE Liquid *Storax* is a thick viscidus Matter, of the Consistence of Balsam. It is composed of four Ingredients ; which are, *Storax*, the raw Pine-tree Pitch, call'd white Incense, Oil and Wine, beat up in Water to the Consistence of an Ointment, of a greyish Colour like Potters Clay. Chuse your Liquid *Storax* as grey as may be, that has the *Storax* Smell, of a good Consistence, and as little of Filth and Dirt as may be : Its Use is in Surgery, especially for an Ointment that bears its Name, and is much used in the Hospitals, especially *Hôtel Dieu* in *Paris*, where it serves them very successfully in the Cure of the Scurvy, Wounds and Gangrene : The Perfumers use it but seldom, if they can get the other *Storax*.

It is a fat Balsam-like Substance, much thicker than *Venice* Turpentine, of a strong Smell and of

a whitish Colour, which is kept in Water because of its Clamminess : It is brought to us from the *Streights* ; that this *Storax* differs much from the other, is apparent. *Matthioli*, *Dioscorides* and *Baubin*, are of Opinion it is the Composition before describ'd ; but *Serapio* will have it to be an Exudation from the Kernels or Fruit of the Tree : *Avicenna* will have it from the Bark ; and *Gerard* a Liquor, or Gum, that falls from the *Storax-Tree*, and will never be hard : *Parkinson* saith, that none of the Ancients have made Mention of any such Thing, and says, it is assuredly some other Thing, of which, as yet, we have no Knowledge ; but whether we know the Original of it or no, it is less Matter, since we know the Thing, and, by manifold Trials, the medicinal Uses thereof. Inwardly taken it opens Obstructions, discusses Wind, expels Vapours, helps Hysterick Fits, eases the Cholick, and provokes Urine. Dose from half a Dram to a Dram, in Pills or a Bolus. Outwardly, it is good against Sciatica, Palsy, Contraction of the Joints and Nerves, Bruises, Wounds, Ulcers, &c. made into a Balsam, or Plaister.

18. Of Pastiles.

THE *Pastiles* for burning are a Composition of *Benjamin* and *Storax*, *Pomet.* dissolved together over a small Fire as quick as may be : They are form'd into Tables of what Shape you please, and are in Goodness according to the Materials of which they are made ; some add to them Musk, Civet and Ambergrease. In short, they are made richer and meaner, as the Maker will afford ; but the more usual Additions are *Liquid Storax*, *Rhodium* and *Labdanum* ; and to make them black they seldom use any thing else than Charcoal : *M. Charas* mentions three Sorts, which may be found in his Book of Chymistry, *Page* 1057, where he calls them *Trochisci Odorati vel Aviculæ Cypreæ*.

19. Of Virgin Milk.

BESIDES the *Virgin Milk* made with *Lytbarge*, we make another *Pomet.* from Tincture of *Benjamin* and *Storax*, which is what the Surgeons and Barbers use, by reason of its pleasant Smell. The Tincture of *Benjamin* and *Storax* is call'd *Virgin Milk* Tincture ; because when it is put into Water it will turn it white as Milk. Those who would have their *Virgin Milk* fine use the dry Balsam of *Peru* in Shells, and *Storax* in Tears ; to which they add Musk, Civet and Ambergrease. Some who value

value not the Smell add Myrrh, because good for taking away red Spots in the Skin. This Tincture ought to be very fine, red, clear, and very fragrant, smelling the least of the Spirit of Wine that is possible.

Styrax, or *Storax*, is a fragrant resinous Gum, whereof there are three

Sorts: The first is call'd *Styrax ruber*, or the *Red Storax*; and by some *Thus Judæorum*, the *Jewish Frankincense*, because they believed it was the *Frankincense* which the *Magi* carry'd to the Saviour of the World. This Gum is in the Mass reddish or yellow, which they draw by Incision from a Tree of a moderate Height, call'd *Styrax Arbor* by Gerard and Ray, and *Styrax folio Mali Cotonei*, by C. Bauhinus and Tournefort. This Tree is like that of the Quince, but the Leaves are much smaller, oblongish, firm, green on the upper Side, and whitish underneath, and downy. The Flowers grow upon the Branches, collected several together; each of which, according to Mr. Tournefort, is a Funnel open at the Top, and cut into several Parts, disposed round, that makes a larged jagged Cup of several Points: When the Flower is gone there appears the Fruit, of about the Size of a Filbert, that is white and cover'd with a fleshy Rind, the Taste something bitterish; and under this Rind, or Shell, are two or three hard strong Kernels, full of a soft oily Seed, that has a Smell like the Gum of *Storax*, and an unpleasant Taste: The Gum ought to be chosen neat, soft, fat, of a sweet pleasant aromack Smell, and not too dry: It is sometimes full of the Saw-dust of the Wood of this Tree, and other Impurities.

The second Sort of *Storax* is nam'd *Calamita*, because it is often brought in Reeds to preserve its Beauty and Smell: Sometimes it is brought us in reddish Lumps, full of white Specks; sometimes in separate Tears, which, if fine, you ought to chuse, or else such as come in clean small Bits, that are reddish without and white within, and that smell like the Balsam of *Peru*: These two Sorts contain a good deal of Oil and some volatile Salt, are proper to strengthen and refresh the Brain, Nerves and Stomach, resist malignant Humours, and mollify the Hardness of the Spleen, Glands, &c. The third Sort is *Liquid Storax*, which is an oily, viscous, gross Matter, having the Consistence of a thick Balsam, being made up of several Bodies incorporated together; and is emollient and very resolute, and revives the Brain by its Smell; but is seldom apply'd otherwise than externally.

[The *Storax-Tree* is the *Styrax Arbor*. J. B. 1. 341. Rai. Hist. 2. 1680. *Styrax Arbor vulgaris*. Park. 1530. *Styrax folio mali Cotonei*. C. B. Pin. 452.

There are two Sorts of the *Dry Storax*, the *Calamita* and the *Rubra*, these are both the same Gum, but different in Purity; the *Calamita* is that in Grains, and the *Rubra* that in the Lump.

The true *Liquid Storax* is a reddish brown Substance, of the Consistence of common Turpentine and of a strong Smell, made from the Bark of the same Tree which produces the other *Storax*; but this is no where to be found among us at present; what is now sold under that Name is a Bird-line made with the Bark of the *Indian Rosa Mallos*, boil'd in Sea Water; and even that we can seldom meet with, the Mixture describ'd by *Pomet* being generally sold instead of it.]

20. Of the Abyssine Myrrh.

MYRRH is a resinous Gum that flows from a little Shrub that is *Pomet*. very thorny, by Incisions that are made into it, in clear transparent Tears of a white Colour, that in growing older become of a deep Reddish. These small Trees, whose Leaves come nearest in Likeness to the Elm, grow plentifully in *Happy Arabia*, *Egypt* and *Africa*, especially among the *Troglodytes*, from whence it derives its Name, as well as that from *Abyssine*; because they gather a great deal in the Kingdom of the *Abyssines*, or *Prester John's* Dominions. Chuse the finest Tears, of a golden yellow Colour, clear and transparent, brittle, light, bitter to the Taste, of a strong agreeable Smell: And thus chosen, it is the true *Myrrh*, or *Stacte* in Tears.

They ought to be undeceived who believe, according to what a late Author has advanced, that all the *Myrrh* the Druggists sell has not the requisite Qualities it should have; as for the little the Apothecaries sell, it is not worth speaking of; beside, that what they sell they first buy of the Druggists. However, as we cannot always find *Myrrh* so perfectly fine as we could wish, we must be satisfy'd if we get that in small Lumps, or large red Tears, clear and transparent, that when broke has little white Spots in it: This is brought out of *Turky* and *Ethiopia*, from whence comes the best Kind, being of a bright yellowish, or red Colour, somewhat clear, brittle, of a biting and very bitter Taste, a strong Smell, fat, resinous, and mark'd within with white Specks: It is either firm and solid, which is properly call'd *Myrrha*; or liquid, which, according to *Dioscorides*, is call'd *Stacte*, which is so gather'd from the Tree without Force.

There is prepared from it an Extract, an Oil or Liquor of *Myrrh*, Troches, and an Oil by Distillation: As to the Liquor, *Lemery* says it is the true soluble Part of the *Myrrh*, moisten'd

with the Humidity of the Whites of Eggs, and the moist Places in which it is made, which is generally a Cellar; and in his Opinion this is the best Oil yet invented; for if it be drawn by Spirit of Wine or Distillation in a Retort, it is so torrifed that it loses its best Parts; whereas *per Deliquium*, what volatile Parts this Gum contains are preserved in their natural Being, the Humidity joyn'd to it not being able to alter its Nature.

Myrrh opens and removes all Obstructions of the Bowels, provokes the Courses, and removes all, or most Distempers incident to the Womb; being given in a Bole, Electuary or Powder, from six Grains to twenty. *Stacte* is that liquid Part which is found in the Centre or Middle of the Lumps or Clots of *Myrrh*, when they are fresh and new, or squeez'd from the *Myrrh*, as *Dioscorides* teaches. Besides its opening and anti-hysterick Faculty, it is likewise used with Success in a Quinsy, Hoarseness, Cough, Pleurisy, Fluxes of the Belly, and Quartan Agues: Outwardly, in Wounds, Tumours, Gangrenes and rotten Bones: It attenuates, discusses and resists Putrefaction. *Myrrh* has given a Name to the Troches of *Myrrh*: It is also used in *Venice Treacle*, in the Confection of Hyacinth, Pills of Agarick, the Divine Plaster, in *Oxycroceum*, and many other Compositions.

Myrrha, or *Myrrh*, is a resinous Lemery. Gum, that flows by cutting a thorny Tree that grows in *Arabia Felix*, *Egypt* and *Æthiopia*, in the *Abyssines* Country, and amongst the *Troglodytes*; for which Reason the best is call'd *Myrrha Troglodytica*. It ought to be fresh, in fine clear Tears, light, of a golden Yellow, or reddish Colour, having little white Specks within, like those upon the Nails, of a fat Substance, a strong Smell, and not very pleasant, the Taste bitter and acrid; but as this Gum so chosen is rare, it ought to be reserv'd for internal Uses, and the common may serve for Plaisters, Ointments, &c. It is aperitive by Urine, and a little astringent by Stool, provokes the Courses, and hastens the Birth, is an excellent Vulnerary and proper in Ruptures, both internally and externally apply'd. The *Myrrh* which the wise Men of the *East* presented to our Saviour, was likely a Drug different from ours; for it is represented to us as a very precious aromattick Perfume, instead of which our *Myrrh* is common, and has neither Taste nor Smell that is agreeable. Some hold that it was the *Stacte*, of which I shall treat in its Order; others will have it to be the *Storax*; others again pretend that it was a very scarce and fragrant Gum, or Balsam, which had then the Name of *Myrrh*, and which is now un-

known to us by that Name; but this is a Matter too difficult to decide here.

[The Tree which produces the *Myrrh* is yet unknown in *Europe*, and *Fuchsius* and many others are of Opinion, that what we see under the Name of that Drug was not the *Myrrh* of the Antients, but that what we now call *Benjamin* agrees much better than it with their Description of the *Myrrh*.

The most probable Conjecture in regard to the *Myrrh* offer'd by the *Magi* to our Saviour is, that it was an oily Liquor found in the Body of the *Myrrh-Tree*, as we have some Sort of Mention of such a Substance in some old Authors, who speak of it as very precious, and an Ingredient in the richest Perfumes.]

21. Of the Myrrha Stacte, or Liquid Myrrh.

THE *Stacte*, or *Liquid Myrrh*, is that which was presented to our Lord and Saviour by the *Magi*, or wise Men, and which the Ancients call *Stacten*, or *Myrrha Stacte vel Electa*, whose Scent was very grateful; as is observ'd in the third Lesson of the Office of the Virgin, where it is said in express Words, *Quasi Myrrha electa dedi suavitatem odoris*. It was a fat unctuous Liquor, which is met with in *Myrrh* newly fallen from the Tree, as also that which falls from young Trees, without Incision. But as at present this precious Merchandise, or Commodity, is altogether unknown to us, several Persons have invented an artificial *Stacte*, by dissolving *Myrrh* in Oil, which they call *Stacte Unguent*. Others make it thicker, and give it the Name of *Artificial Stacte*.

Stacte, *Stacten*, *Myrrha Stacte*, or *Liquid Myrrh*, is a Kind of Balsam, or Lemery. gummy Liquor, that is of a fragrant Smell, and collected from under young Trees that produce *Myrrh*, and which drops from them without cutting. The Ancients preserv'd this Drug as a precious Balsam, and believed, with just Reason, that it was that Kind of *Myrrh* spoke of in the Gospel, and which the *Magi* brought to the Saviour of the World at *Bethlehem*, with Gold and Frankincense. This has the same Virtues with the other *Myrrh*, but is more efficacious; though the *Stacte* that we have brought us by the Merchants is oftentimes artificial, being made by dissolving *Myrrh* in Oil, and mixing a little Wax with it, to give it a Consistence.

[The true *Stacte*, according to *Dioscorides*, was no other than a liquid *Myrrh*, either press'd out of

of the common *Myrrh* a little moisten'd, as he was of Opinion; or, according to *Pliny*, flowing naturally from the *Myrrh-Tree* without Incision. It is the common Opinion that this was the *Myrrh* offer'd to our Saviour; but I cannot conceive how any Preparation of *Myrrh*, by Expression, could be so precious or so excellent as that must have been; and if it was only the spontaneous Flowings of the Tree I cannot but think we should certainly have been better acquainted with it by this Time, as naturally, among the Quantity of *Myrrh* we receive, we should at one Time or other have seem some of it.]

22. Of *Assa Fœtida*.

Pomet. *ASSA Fœtida* is a Gum that flows, during the Heats, from the Trunk of a small Shrub, whose Leaves are like Rue, that grows plentifully in the *Indies*, especially about the City of *Utar*, where it is call'd *Hingt*. It also comes from *Persia*, *Affyria* and *Libya*. The Natives of the Place cut the Trees just at the Roots, from whence runs a white Gum, inclining to Red, of a very stinking Smell; for which Reason the *Germans* call it *Stercus Diaboli*, or *Devils Dung*.

Chuse the *Assa Fœtida* in Clots, or Lumps, full of white Tears, dry, and which being fresh cut, will be of a yellowish White, that in a little Time after changes into a fine Red, tending to a Violet Colour; and whose Smell may be born with; and meddle not with that which is fat, nasty, full of Dirt and Rushes that come along with it. Likewise reject such as is black, and of such a disagreeable Smell as is scarce possible to bear: This Drug is of great Importance in Medicine, and much used by Farriers as well as the Physicians.

There are several other Names that *Assa Fœtida* goes by; as the *Syrian Juice*, or *Liquor*, the *Mædian*, *Persian*, &c. The greatest Part of it that comes to *France* is brought from *London*, from whence it is brought in large Earthen Vessels, like those in which we have Oil of Turpentine brought us sometimes from *Provence*. They have such vast Quantities of *Assa Fœtida* sometimes in *London*, as well as other Drugs, that they have great Warehouses fill'd with these Kinds of Commodities.

The *Assa Fœtida* in Tears is much finer and fitter for internal Use than that in the Lump.

Assa Fœtida is a Gum in great yellow Clots, of a strong unpleasant Smell, that drops out of the Trunk of a Shrub whose Leaves have a great Resemblance to those

of Rue: But *Bon* assures us, that it is press'd out of the Roots of a certain Plant growing in the Kingdom of *Persia*, not far from the Sea-Coast: And that there are two Kinds of this Plant, the first being a Sort of a Shrub, bearing Twigs and Branches very much resembling the Willow, or Osier: The *Assa Fœtida*, says he, is press'd out of the Chives, or Flowers, of this Plant, being cut small and bruised, which afterwards is dry'd and harden'd. The second Kind of *Assa Fœtida* is press'd out of the Roots of a Plant that sends forth very thick and stinking Stalks, bearing Leaves like those of *Spurge*. That of the Shops is a reddish Gum, consisting of whitish, and sometimes Carnation and Violet colour'd Drops, being of a bitter biting Taste, and a strong, vehement rank Smell, like Garlick or Leeks; that is the best which is brought out of the Eastern Parts, in clear, pure, transparent Drops: It is adulterated with *Sagapenum*. This Gum is cephalick, splenetick, hysterick and vulnerary; but chiefly used in Obstructions and Suffocation of the Womb, Obstructions of the Liver, Spleen and Lungs. It has been found a Specifick in the Epilepsy, Vertigo, Lethargy, and other Diseases of the Head. Dose from half a Scruple to a Dram, in Pills or otherwise.

This Gum will dissolve in Water, Vinegar or Wine, and therefore consists most of aqueous Parts, and has very little of Rosin in it; for which Reason it is not so often used with Spirit of Wine as with aqueous Menstruums. *Schroder* says, if any be troubled with the Epilepsy he ought presently to sit with his Head over the Fumes of *Assa Fœtida*; but it is generally taken inwardly in Pills or Tincture.

[The Plant which produces the *Assa Fœtida* is the *Assa Fœtida Disgunensis Hingisch*, *Umbellifera Levisticum Affinis*, *Instar Pæoniæ ramosus caule pleno, maximo semine foliaceo, nudo, solitario Branchæ Ursinæ vel Pastinachæ simili Radice Asam fœtidam sudente*. Kœmp. Amæn. Exot. 535, Fig. 536.—*Altith seu Asafœtida, Javanis & Malais Hin*. Dicta Bont. 41. The *Assa Fœtida* flows either spontaneously or by Incision, from the Root. There have been various Opinions among Authors about the Plant which produced this Drug, and several different Trees and Plants have been described as yielding it. It is to *Kempfer* that we owe the Knowledge of the Truth. Many have doubted whether our *Assa Fœtida* be that of the Ancients; because they call'd it the Food of the Gods; but we now find that the *Persians*, *Indians*, and other *Eastern* People, eat it in Sauces, and call it expressly by that Name. The Plant which produces it grows plentifully in the Province of *Labir*, in the Domi-

nions of the Great Mogul, and of *Chorasan* in *Persia*.]

23. Of Galbanum.

Pomet. **G**ALBANUM is a Gum that flows from the Root of a Plant which the Botanists call *Ferula Galbanifera*, or the Fennel-Giant, bearing the *Galbanum*, whose Leaves are, according to the Figure described, taken from the Original which I have in my Hands, given to me by Mr. *Tournefort*: On the Top of the Stalks grow flat Seeds of the Size and Thickness of our Lentils, which are frequently found among the common *Galbanum*. This Plant flourishes in *Arabia Felix*, *Syria*, and throughout *India*.

We have two Sorts of *Galbanum* from *Marseilles*; to wit, that in Tears and that in the Mass: The first ought to be chosen in fine Drops, yellow within and of a golden Colour without, bitterish in Taste, and of a very strong Smell. The other Sort in the Mass ought to be chosen dry, clean, the most furnish'd with white Tears, and the least fetid that is possible. It is a Drug much used in Physick, as well internally as externally.

Galbanum ought to be chosen fat, inclining to a reddish Colour, consisting of several whitish and shining Lumps; it will not dissolve in Oil, but easily in Water, and is of a pungent bitter Taste and a strong Smell: It powerfully brings down the Courses, cures the Suffocation of the Womb, expels the After-Birth, and helps to fetch away a dead Child. The Fumes of *Galbanum* are very prevalent against Hysterick Fits or Vapours, and is given in Substance from half a Scruple to half a Dram. A Plaister made of *Galbanum* is very properly and profitably apply'd to the Navel in Hysterick Fits or Vapours; or else the Navel may be anointed with the Oil in the same Cases. The *Galbanetum* of *Paracelsus* being an effectual Medicine in a Palsy and Cholick, is prepar'd after the following Manner: Take *Galbanum* one Pound, Oil of Turpentine half a Pound, Oil of Lavender two Ounces, dissolve and digest them in a Retort, with a sufficient Quantity of powder'd Lime, and keep the Liquor for Use. *Galbanum*, outwardly apply'd, resolves and discusses Tumours, upon which Account it is apply'd, by way of Plaister, to venereal Buboës, and helps to discuss all Sorts of schirrous Tumours.

Lemery. *Galbanum* is a Gum whereof we have two Sorts, the one in yellow Tears, or Drops, of a strong Flavour and unpleasant Smell, of a bitter Taste and a little acid. The other is in a large fatty and glutinous Mass, full of Stalks and Dross, and of a very stinking

Odour. Both Sorts flow by Incision from the Root of a Kind of Fennel-Giant, which grows in *Arabia*, about the Height of a Man; the Stalk is thick and full of Pith, the Leaves broad and large, resembling those of Parsley: The Flowers grow in Tufts, or Clusters, composed usually of five Leaves, made like a Rose at the End of the Cup; when the Flower is gone the Cup becomes a Fruit, consisting of two very large Seeds, that are oval, flat, and thin, like those we see come over in the *Galbanum*.

That which is in Drops, yellow, pure, fat, heavy, and not sticky, yet with some Branches or Bits of the *Ferula* in it, is to be chosen, which is not too dry or moist, and flames when burnt. It softens, dissolves, discusses, and yet extracts Things forth of the Flesh: It is chiefly used against Vapours, Fits of the Mother, and Obstructions of Liver, Spleen and Womb. It dissolves Tumours and Nodes, gouty Swellings and Pains, being apply'd Plaisterwise to the Parts afflicted.

Galbanum is dissolv'd, as some other Gums are, in any Liquor, as Water, Vinegar, or Wine; dissolve it in the Liquor, strain and inspissate, and it is what is call'd *Galbanum Colatum*: Some hang it in a Cloth over the Vapour of a Bath, and so let it drop out; but others put it into hot Water, and cast off the Rubbish which swims at the Top. Oil of *Galbanum* is made by a Retort with Vinegar; the Tincture by Spirit of Wine acuated with Spirit of Nitre.

[*Galbanum* is a Gum Resin, which is got by Incision from the *Ferula fruticosa semper virens, foliis anisi, Galbanifera ex qua Galbanum officinarum*. Par. Bat. Prodr. 334. *Oreoselinum Africanum Galbaniferum frutescens Anisi folio*. Tourn. Inst. 319. *Oreoselinum Anisoides Arborescens Ligustici foliis & facie, flore luteo Capitis Bonæ speciei*. Breyn. Prodr. 2. 79.

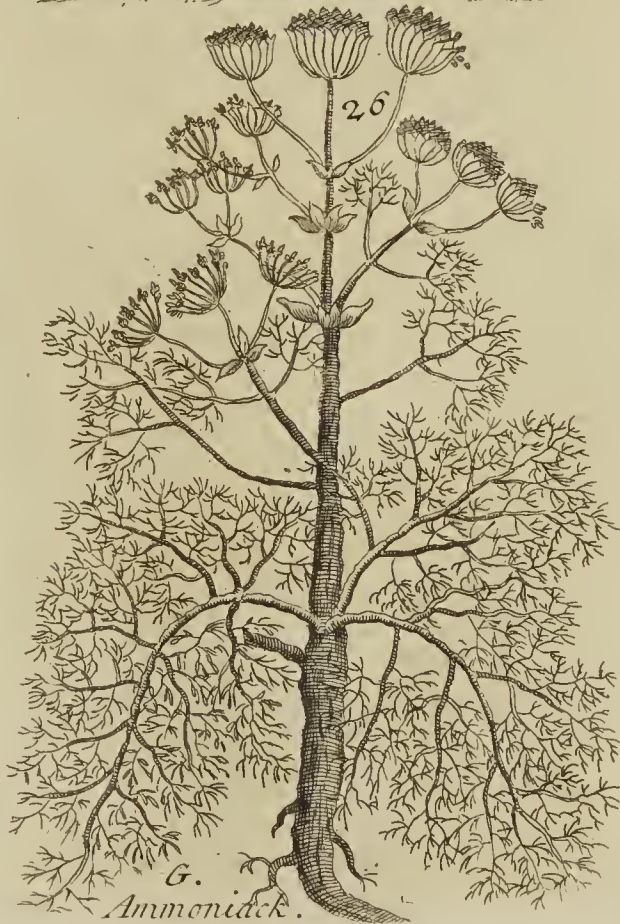
There are two other Species of the *Ferula*, which also yield a *Galbanum* no way distinguishable from the common Kind, these are the *Ferula Africana Galbanifera frutescens, Myrrhidis folio*. C. Commel. Hort. Amst. 11. pag. 115, and the *Ferula latiore folio*. Hist. Ox. 3. 309. But all the *Galbanum* we use is from the Species first named.]

24. Of Gum Sagapenum.

THE *Sagapenum*, likewise call'd *Serapinum*, because of its Smell, *Pomet.* that is almost like that of the Pine, and by the *French*, *Gum Seraphin*, flows from the Trunk of a Plant whose Leaves are very small, and the Seeds resembling those of *Galbanum*, except that they are less. It grows plentifully in *Persia*, *Media*, &c. from whence the Gum is transported to

of Gums.

Book 8.



to us and all other Parts of *Europe*. Chuse your *Sagapenum* in fine Tears, clear and transparent, of a strong Smell like that of the Pine; outwardly of a yellowish or reddish Colour, inwardly the whitest and least full of Dirt and Filth that can be. This enters into several *Galenical* Compositions. Mr. *Wormes*, a *Danish* Physician, says, in a Book of his, that it is admirable for the Falling Sickness and Palsy; I know, by my own Experience, that it is excellent for Asthmas, taken about the Bigness of a Pea at Bed-time, and the same Quantity in the Morning rising.

This Gum is attractive, drawing forth Splinters, Thorns, &c. gotten into the Flesh; it has, as *Hoffman* fancies, a peculiar magnetick Quality, *qua intestina dislocata in Iliaca Passione ex Hernia, in pristinum reducit locum*; for which Reason he made it the chief Ingredient in the magnetick Emplaster. It is also used in Disaffections of the Womb, and being apply'd, it cures the Sty in the Eye-Lid. It purges Water and all gross Humours from the Stomach, Guts, Womb, Reins, Head, Nerves, &c. Is good in Dropsies, Convulsions, Palsies, Numbness, Weakness and Obstructions; besides which, it is excellent in Pleurifies, to ease Pains and dissolve hard Tumours of the Spleen. Dose from one Dram to two Drams; but because it is apt to disturb the Stomach, it is corrected with Ginger, Cinnamon and Mastich.

Sagapenum, *Serapinum*, *Sacoponium*, *Lemery*. is a Gum reddish without and whitish within; of a strong unpleasant Smell, of an acrid Taste, that flows by Incision from a Sort of Plant that is of the Nature of Fennel. Chuse *Sagapenum* in Drops, that are pure, neat and bright: It yields abundance of Oil and volatile Salt, and will dissolve in Wine, Vinegar, and in Juice of Plants; but had better be reduced to Powder when used in Compositions that require its Dissolution. This Gum is incisive, penetrating, aperitive, a little purgative, sudorifick; opens Obstructions of the Spleen, Mesentery and Liver; assists Respiration, and strengthens the Nerves; is good in Epilepsy, Palsy and Asthma; to provoke Urine and the Terms, and to suppress Vapours. Dose ten or sixteen Grains in Pills. There is a Spirit and Oil made from it, as from *Galbanum*: The acid Spirit has all the Virtues of the Gum, but with this Advantage, that it is more penetrating; for which Reason it is successfully given against Obstructions of the Womb, &c. The Oil is good for the same Purposes, but is mostly used against Vapours, being smell'd to or anointed upon the Nostrils: It is seldom given inwardly, except in Fits of the Mother, to four or five Drops in some proper Vehicle.

[The Plant which produces the *Sagapenum* is another Species of the *Ferula*; it is the *Sagapenum Chomel*. Plant. Af. 190. Rai. Hist. 1. 1844. The Gum is brought to us from *Alexandria*, and is purgative, attenuant and aperitive. The Dose is from twenty Grains to a Dram.

25. Of Gum Opopanax.

OPOPANAX is a Gum that flows, according to some Authors, from *Pomet*. a ferulaceous Plant, call'd *Panax Heracleum*, or *Hercules's All-heal*. It is brought us from the *Streights*, and sometimes from the *East-Indies*, though great Quantities grow in *Macedon*, *Achaia*, and other Parts of *Greece*. The Leaves of the Plant are almost like those of the Fig-Tree, divided, or partition'd, into five Parts; the Stalk is very high and woolly, producing at the Top a great Tassel, or Bunch, with yellow Flowers; and after that a Seed, that is burning upon the Tongue and of a strong Smell; the Roots are white, a little bitter, and cover'd with a pretty thick Bark. From the Cutting of this Bark the *Opopanax* flows liquid, and white at first; but when it is afterwards dry'd it becomes, by degrees, of a golden Colour on its Surface. There are three Sorts brought from *Marseilles*, viz. that in Tears, that in the Mass, or Lump, and the adulterated or flat Kind.

The first Sort ought to be chosen in fine Drops, white within and of a gold Colour without; of a strong Scent and an unpleasant bitter Taste, the dryest and least full of Dirt that can be got. The second Sort, that is in the Lump, ought to be as full of Tears, and as near the Colour and Smell of the first as possible. The flat Sort is that call'd the Companies *Opopanax*, and which several sell for that in Tears, though it is easy to know the Difference; because the true is in little round Drops, and the flat Sort of the Breadth and Thickness of one's Thumb; this ought to be entirely rejected, for it is a Counterfeit, made of a Mixture of *Galbanum* and another cheap Gum, which need not be mention'd here. *Opopanax* dissolves Wind, purges Flegm, which is thick and tough, from the remote Parts, as from the Womb, Joints, &c. opens the Breast and Lungs, softens Tumours, and, taken in at the Mouth by Fumes, cures Catarrhs, and the falling down of the *Uvula*. It is reckon'd an excellent Thing against an old Cough, Sharpness of Humours, Difficulty of Breathing; and being drank an Hour before the Fit of an Ague, it takes away the cold Fit, especially if the Stomach and Back-Bone be also anointed with the Oil thereof, or volatile

volatile Spirit, both of which possess all the Virtues of the Gum.

This Gum, when new, is of an insupportable strong Smell; but that, as well as its natural Whiteness, wears off in keeping.

Oppanax is a yellow Gum that is *Lemery*. drawn by Incision from the Stalk and Root of a *Spondylium*, that grows in *Macedon*, and other Parts of *Greece*. This Plant is call'd *Spondylium majus*, *sive panax Heracleus quibusdam*; the *Great Spondylium*; or by some, *Hercules's All-heal*, according to *J. Baubinus*, *Ray*, and *Tournefort*: The Stalk is high and woolly; the Leaves like those of Figs, rough to the Touch, divided into five Parts; the Flowers grow in Clusters upon the Tops of the Branches; they are small, white, composed each of five unequal Leaves, disposed like the Flower-de-lis: When these are gone they are follow'd by Seeds join'd two and two together, flat, large, oval, hollow, or cut at the Top, strip'd along the Back, of a yellowish Colour, a strong Smell, and poignant Taste; the Root is long, white, full of Juice, odoriferous, a little bitter to the Taste, cover'd with a thick Bark: The *Opopanax* drops from the said Root in a white Liquor, which thickens as it dries, and grows yellow upon the out Parts. Chuse it fresh, clean and pure, in large Drops, that are yellow without and white within, fat, and pretty brittle, of a bitter Taste, and a strong unpleasant Smell; it affords a great deal of Oil and volatile Salt, is emollient, attenuating, digesting, expels Wind; is proper in hysterick Cases, and to resist Putrefaction.

[The Plant which produces the *Opopanax*, is the *Panax Pastinacæ folio*. C. B. Pin. 156. *Pastinaca Sylvestris altissima*. Tourn. Inst. 319. *Panax Heracleum*. Hist. Ox. 3. 315. It flows naturally, and without Incision: It is at first of a yellowish Colour, but turns reddish by Age; it is seldom prescribed alone, but is an Ingredient in many Compositions.

26. Of Ammoniacum, or Gum Ammoniac.

Pomet. THIS is a Gum that flows in white Tears, from the cut Branches or

Roots of a Plant of the ferulaceous Kind, that grows in abundance in the Sands of *Libya*, especially about that Place where sometime the Temple of *Jupiter Ammon* stood; from whence it has its Name. This Gum is brought us in Tears, or else in large Lumps, wherein are a great many white Drops or Tears, as well on the out-parts as within. It is of a tolerable grate-

ful Smell, inclining towards that of *Opopanax*. Chuse this Gum in Tears, in the finest, dry, white, round Drops, of a bitter Taste, unpleasant enough; and that in the Mass or Lump, as full of Tears and as clean as possible. It is used in several topical Medicines; and *Monsieur de Meuve*, in his Pharmaceutick Dictionary, attributes great Virtues to it, whereto the Reader may have Recourse. It is emollient, and wonderfully discussive, admirable in Asthmas, and used ordinarily to discuss hard Tumours in Womens Breasts with great Success: An Extract of it takes off Roughness from the Windpipe, thickens thin and sharp Rheums, which fall down upon the Lungs; and is used in Pectorals for the same Purposes. There is, besides this, an Oil, volatile Salt, and Spirit of *Ammoniacum*, according to *Lemery*, in which Processes you have not much Difference from those of *Charas*, only that the last requires the Retort to hold eight Times the Quantity; *Lemery* but three Times: *Lemery* also says, there is no need of adding *Alcalies* in Rectification, because they rather hurt and spoil these Kinds of Spirits than make them better.

This Gum is purified by dissolving it in Vinegar; then straining it through a Cloth, and thickening. The Spirit of *Ammoniacum* opens Obstructions, and is used with Success in the Scurvy, Dropsy, and the Jaundice; as also for Stoppage of Urine; but particularly in Diseases of the Womb: Dose from eight Drops to twenty in Rhenish Wine, or the like. The Oil is given for the same Purposes, from two Drops to six, with double refin'd Sugar, &c.

Ammoniacum Gummi, vel Gummi Hammoniacum, sive Gutta Ammoniaca, Lemery. Gum *Ammoniac*, is a yellow Gum on the Outside, and white within, of an unpleasant Smell, almost like *Galbanum*, inclining to a bitter Taste. It flows in white Tears from the Branches and Roots that are cut off a Sort of Fennel call'd *Ferula Ammonifera*, or the Fennel, bearing *Ammoniac*, that grows plentifully in the Deserts of *Lybia*, especially about that Part where the Temple and Oracle of *Jupiter Ammon* stood. Some call this Plant *Metopion*, from being very poisonous. The best Gum is in fine neat Tears, almost like *Olibanum*, dry, white, brittle. It softens before the Fire, and is easy to reduce to Powder, of a little bitterish Taste, and an unpleasant Smell. The Druggists sell it also in the Mass or Lump, loaded with a great deal of Filth; and this serves to make Plaisters of. This Gum yields plenty of essential or volatile Oil, some Flegm and Earth. It attenuates, resolves, digests, is aperitive, proper for Hardness of the Spleen, Liver, and Mesentery, opens Obstructions,



Indian Dragons Blood



Gum Elemi.

28



Canary Dragons Blood.



tions, provokes Womens Courses, and is used both internally and externally.

[The Plant which produces the *Gum Ammoniacum* is not certainly known; it is supposed to be another Species of the *Ferula*, and many have thought the *Galbanum Sagapenum* and this *Gum* to be all produced by the same Plant, growing in different Climates; but as we now know that the *Sagapenum* and *Galbanum* are produced by different Plants, it wou'd be absurd to believe, that the *Ammoniacum*, which is much more different from either, than they are from each other, shou'd be produced by the Plant from which we have either of them.]

It is purgative in a small Degree, but is a powerful Resolvent, and excellent in Obstructions of the Viscera. The Dose is from a Scruple to half a Dram.]

27. Of Indian Dragon's Blood.

Pomet. **T**HE *Indian Dragon's Blood* is a Gum that distils or drops from the Trunks of several Trees, whose Leaves are like Sword Blades, of half a Foot long, and of a green Colour; at the Bottom of which grow round Fruit, of the Size of our Cherries, that are yellow at first, afterwards red, and of a beautiful blue when ripe; in which, having taken off the first or outward Skin, appears a Sort of Dragon, which has given Occasion to have the Drug nam'd, though very improperly, *Dragon's Blood*, since it is the Gum of a Tree, and not the Blood of any Creature, as some believe still.

The Inhabitants of the Country cut the Trunks of the Trees, and there presently flows a fluid Liquor, that is as red as Blood; which hardens as soon as the Sun shines on it, and forms itself into little brittle Tears or Crumbs, of a very fine red Colour; and when the first and best Sort is fallen, there drops another. This is sometimes brought us wrapp'd up in the Leaves of the same Tree, in the Figure and Size of a Pigeon's Egg; but commonly it comes folded in the same Leaves, of the Length and Thickness of one's Little Finger, and sometimes also of the Size and Shape of the Sebesten. Chuse *Dragon's Blood* in little Tears, that are clear, transparent, and very brittle. The finest, or first Sort, is very scarce in *France*; the best to be met withal at present is what comes in little Reeds, which ought to be dry and easy to break, and that when rubb'd on Paper, or hot Glass, will leave behind it a beautiful red Stain; upon which Account, antiently, they used it to paint Glass red. There is some brought likewise in the Mass, which is like that in Tears, but the fine is difficult to be met with.

Hoffman thinks that which is in Drops, and is the very finest Sort, is made from the coarser, by dissolving of it, depurating it from its Fæces, and inspissating; and that those Drops are first extracted with Spirit of Wine, because, being infused or digested in Spirit of Wine, it yields a delicate, blood-red Colour. It is good to stop all Sorts of Fluxes, whether of Flood or Humours, whether Defluxions from the superior Parts, or Fluxes of the Bowels or Womb, the Bloody-Flux, Whites, and Gonorrhœa, being inwardly given, from half a Dram to a Dram, mix'd with Conserve of red Roses, or some other proper Vehicle. It is good against Spitting of Blood, and stops Catarrhs, being of a drying, binding, and repelling Property. Being finely ground, it is used by Goldsmiths for Enamel, by Jewellers to set Foils under their precious Stones, for their greater Lustre. By Painters, Varnishers, and Japanners, to make Varnish and Japan, by mixing it with common or Shell-Lac, or Seed-Lac Varnish.

28. Of Dragon's Blood of the Canaries.

Pomet. **T**HIS *Dragon's Blood* is likewise a Gum that flows from the Trunk and large Branches of two different Trees; after having been cut, the one of which has a Leaf like the Pear-Tree, but a little longer, and the Flowers bear a Resemblance to Tags, at the End of Laces, of a very fine red. The Leaves of the other come nearer to the Cherry, and the Fruit is yellow, of the Bigness of a Hen's Egg, in which is found a Nut, of the Shape of Nutmeg, which contains a Kernel, of the same Figure and Colour.

These Trees grow plentifully in the *Canaries*, especially in the Island of *Porto Santo*; likewise in the Isle of *St. Laurence*, where these Trees are call'd *Rha*, that is to say *Blood*, and their Fruit *Masentra*, or *Voasentra*. The *Natives* of *Madagascar* make an Oil of the Kernels of this Fruit, which serves them to cure Burns, Erysipelas's, and other Diseases that proceed from Heat. The Inhabitants of these Islands cut the Trunks of these Trees, from whence drops a red Gum, which they make into Balls, of different Sizes. But this Sort of *Dragon's Blood*, though good, is always so full of Dirt, that no Body cares to meddle with it. Some soften this *Dragon's Blood* by means of hot Water, and so put it into Reeds, like that which comes from *India*. The Inhabitants sometimes melt this Gum, and put little white light Sticks into it: and when they are cover'd with Gum, they take them out and dry them, to clean the Teeth withal; and these are usually

usually brought over by the *East-India Company*. It is further to be observ'd, that the Reason why the Inhabitants call this Gum *Dragon's Blood*, is, because the Tree that bears it is call'd the *Dragon-Tree*; which, according to *Clusius*, appears to be a Kind of Date-Tree, having a very thick Trunk, about five Yards high, and sending forth several Branches or Boughs that are naked, or bare of Leaves. The Fruit is of a round spherical Figure, of a yellow Colour, and about the third Part of an Inch thick, containing a very hard Kernel, like a Date. The Trunk of the Tree is very rough, and full of Clefts and Chops, pouring forth a Liquor, during the Heat of the *Dog-Days*, which afterwards thickens or congeals into red colour'd Drops or Tears, call'd *Dragon's Blood*; which, though it hardly dissolves in aqueous or oily Liquors, yet ought to be reckon'd among the Gums and Rosins.

29. Of False or Counterfeit Dragon's Blood.

Pomet. **T**HE *Dutch* now bring us a Sort of *Dragon's Blood* which is in flat Cakes, of a very deep red, and shining as well on the Outside as the Inside, pretty brittle, which being broke, is of a very fine red Colour; and when burnt, smells like *Spanish Wax*. This *Dragon's Blood* is nothing else but a Mixture of the true *Dragon's Blood* with two other Gums, which I shall not mention here; and this I am the more sure of, as I have made the Composition myself, and have of it now by me. We have brought from *Holland*, besides this, another Sort of *Dragon's Blood*, made of Gum-Arabick, or that of *Senega*, with a Tincture or Dye of the *Fernambouc Brazil*; therefore I wou'd advise every Body not to make Use of either of these two Sorts of *Dragon's Blood*, as they are only Mixtures of other Gums, which have neither the Smell, Colour, nor any of the Virtues of the true *Dragon's Blood*.

Sanguis Draconis, or *Dragon's Blood*, *Lemery.* is a gummous Juice, congeal'd or coagulated, dry, brittle, and of a red Colour like Blood, drawn by the Incision of a large Tree in the *Indies*, call'd by *Clusius*, *Draco Arbor*, or the *Dragon-Tree*; It is of the Height of the Pine, thick and furnish'd with several Branches. The Wood is very hard, cover'd with a Bark of a tolerable Thickness, and soft. The Leaves are large, shap'd something like those of the Flower-de-lis, being of the Length and Figure of a Sword Blade, and are always green. The Fruit grows in Bunches, the Size of a small Cherry, round, yellow at the Beginning, red af-

terwards; and when they are ripe, of a fine blue Colour, and a little acid to the Taste. *Monard*, and several other Authors, write, that when the Skin is taken off from this Fruit, there appears underneath the Figure of a Dragon, as it is represented by the Painters, with Wings expanded, a slender Neck, a hairy or bristled Back, a long Tail, and Feet arm'd with Talons. They pretend that this Figure gave Name to the Tree; but I believe this Circumstance fabulous, because I never knew it confirm'd by any Traveller.

The finest and best *Dragon's Blood* is that which drops first from the Tree in little Tears, that are clear, transparent, and easy to break, of a resplendent red; but this is very scarce, and not brought us in War-time; so we are forced to content ourselves with the second Sort, [*describ'd already by Pomet*]. The true *Dragon's Blood* yields a sufficient Quantity of Oil, and a little essential Salt. It is very astringent, agglutinative, drying, stops Hemorrhages, Fluxes of the Belly, deterges and consolidates Wounds, strengthens luxated Joints, and is proper for Contusions, used both inwardly and outwardly.

[There appears great Contradictions among good Authors about the Tree which produces the *Sanguis Draconis*; but I believe they may all be reconcil'd, by allowing, as it certainly is so, that we have three different Kinds of this Drug sold in the Shops, beside the counterfeit one describ'd by our Author.

The first, or *Indian Dragon's Blood*, is produced by the *Draco Arbor*. Ger. 1339. Park. 1531. *Palma foliis longissimis Pendulis absque ullo Pedunculo ex caudice glabro enatis*. Boer. Ind. alt. 2. 169.

The second, or *Canary Dragon's Blood*, by the *Draco Arbor Indica Siliquosa Populi folio sive Angsava Javanica*, Comm. Hort. Amst. 1. 213. Faq. 109. Ras. Dendr. 113. And

The third, or *Vernish Dragon's Blood*, by the *Arundo sacra Indiæ Orientalis Sanguinem Draconis manans*. Hist. Ox. 3. 220. Raii. Hist. 3. 615. It is with this Sort that the fine red *Chinese Vernish* is made. And to these we may add a fourth, produced by another Species of Palm, describ'd by Dr. *Sherrard*, who calls it *Palma foliis & caudice undique Spinis longis acutissimis nigris Armata*: And this is the Kind which *Keempfer* mentions, and calls *Dijerenang sive Sanguis Draconis ex fructibus Palmæ coniferæ spinosæ elicitus*. Keemp. Amæn. Exot. 552. But the *Dragon's Blood* this yields is seldom brought to us.

The fictitious Kind mention'd by our Author is never given inwardly, but is of great Use to Painters.

The Story of the Dragon in the Fruit of the Tree is wholly fabulous.]

30. Of Gum Elemi.

Pomet. **G**UM Elemi is a white Rosin, inclining to greenish, that flows by Incision from the Trunk and large Branches of a Tree of a moderate Height, whose Leaves are long and narrow, of a whitish green, silver'd on both Sides; with a red Flower that rises from a little Cup, of the Colour of the Leaves; the Fruit is of the Colour and Shape of our Olives; which is the Reason why these Trees are call'd *Wild Olive-Trees*. There are abundance of these Trees in *Æthiopia* and *Arabia Felix*, from whence this Gum is brought us in Cakes of two or three Pounds Weight a-piece, wrapp'd up in Leaves of the *Indian Cannacorus*; whence it is call'd *Gum Elemi* in Reeds. Chuse such as is dry, nevertheless soft, of a white Colour, tending to green, the Smell sweet and pleasant enough; and take Care it be not the common Incense, wash'd with Oil of Spike, as happens too often; which may be easily found out, as well by its great Whiteness, as its ill Smell, inclining to Turpentine; and that such is always wrapp'd up in the Leaves which are found among the Clove-Wood.

This Rosin adulterated is call'd by those who make it, the *American Gum Elemi*, that Title serving them as a good Pretence to cover their Knavery. The true *Gum Elemi* we have from *Holland* or *Marseilles*, is a natural Balsam for curing of Wounds, for which Reason it is very properly made Use of in *Arcaeus's* Leniment. There is a large Tree found in the *American-Islands*, the Wood whereof is white, and the Leaves like those of the Bay, but that they are a great deal larger: This Tree is so loaded with Rosin, that it yields to fifty Pounds Weight of white Gum, altogether like the common Incense, only that it is not so strong smelling. And as this Rosin is but as yet little known among the Merchants, though common among us, they often sell it under different Names, sometimes calling it *Gum Elemi*, sometimes *Gum Animæ*, and sometimes *Tacamahaca*; but it ought rather to be call'd *American Incense*, in that the Smell and Shape resemble it, and it is not easy to find the Difference. The Gum Chibou is the same with this, and the large Leaves it comes wrapt over in, are those of the *Cashibou*, which the *Americans* use on many such Occasions.

This Rosin comes in Barrels of different Weight. We sell, besides, two other Sorts of *Gum Elemi*; one whereof is like common Rosin, but has a sweet aromatick Smell, and is cover'd with Leaves that cover the Clove-Wood. The

other Sort of *Gum Elemi*, is of an Ash-Colour, inclining to be brown, and in great Pieces that are dry and brittle: But as it is impossible to learn exactly what these are, I shall say nothing further, but that I believe that they are nothing but impure or foul *Gum Elemi*, which may have their good Qualities recover'd, by refining over the Fire, which I dare not, however, yet affirm, not being certain of it.

Gummi Elemi, sive, Resina Elemi, Lemery. is a Kind of gummy and resinous Substance; for it dissolves in Oil, and is inflammable. There are two Kinds of it, viz. the true Gum, call'd also, the *Æthiopian*; and the bastard, or spurious, call'd the *American Gum Elemi*. The true, or *Æthiopian Gum Elemi*, is a Rosin from a whitish Colour, a little inclining to a green, moist and tough, run together in Lumps or Clods of a long and round Shape, for the most Part inflammable, of a pleasant Taste, and smelling something like Fennel. Those Lumps are brought over to us wrapp'd up in a large Leaf, appearing to be a Kind of *Indian Reed*. Bastard or *American Gum Elemi*, is a Sort of white Rosin, not much unlike *Pine Rosin*, inflammable, and of a strong Smell, flowing plentifully out of a certain Kind of Tree, bearing Leaves like the Bay-Tree, call'd *Cleban*. *Parkinson* saith it is a yellowish Gum, clear and transparent, which being broken, shews more white and gummy within, quickly taking Fire, and melting thereat, and of a Kind of quick Scent and Taste. If it is like *Ammoniacum*, or *Gum-Arabick*, or is black, it is good for little or nothing. This Gum is of singular Use in all Wounds and Fractures of the Head and Skull, and to be mix'd with Leniments and Balsams for that Purpose. It is also emollient, digestive, and is anodyne, dissolves Tumours, and opens Obstructions. The Spirit, Oil, and Balsam are distill'd by the Retort in Sand, as hath been taught. The acid Spirit, which contains the volatile Salt of the mix'd, suppresses Vapours and Fits of the Mother, opens the Passages of the Urine, tempers the Heat thereof, prevents breeding of the Stone, and is a good Pectoral. The Oil and Balsam are accounted, by some, specific in the Gout, Palsy, and Convulsions. They cure Ulcers, chiefly of the Fundament, heal and cleanse all Wounds, &c. as well old as new, easing Pain, resolving Contusions, and dissolving Swellings.

[The first Kind of *Gum Elemi* mentioned by our Authors, is the *Gum Elemi Legitimum Æthiopicum*. Geoff. Tract. 357, which was once common among us, but the Quantity and Cheapness of that brought from *America*, has quite banish'd it now from the Shops, so that it is nowhere to be found, and few Druggists know that

there ever was any other *Gum Elemi* than that which they now sell, which is the natural Drop-pings of the *Arbor Brasiliensis Gummi Elemi simile fundens foliis pinnatis flosculis verticillatis, fructu Olivæ figura et magnitudine.* Rai. Hist. 2. 1546. *Prunifera fago similis Arbor Gummi Elemi fundens figura et magnitudine Olivæ ex Insulis Barbadenfi.* Pluk. Alm. 306. This is a very common Tree almost all over the *West-Indies*.

31. Of Gum Tacamahaca.

GUM Tacamahaca is a resinous, liquid *Pomet.* and transparent Gum, that flows from the Trunks of large thick Trees, that grow plentifully in *New Spain* and *Madagascar*, where they are call'd *Haramé*; they are pretty like our Poplars. These Trees are furnish'd with green Leaves, almost like those of the *Box-Tree*; after which comes red Fruit, of the Bigness of our Walnuts, in which is contain'd a fragrant Balsamick Rosin. The Natives cut the Trunks of these Trees, whence distils a white crystalline Liquor, of an agreeable Smell, that hardens sometime after it is fallen, and that serves for the Cure of cold Humours and to abate the Tooth-Ach, but they principally use it to caulk Vessels and Ships with, and the Wood serves for Planks.

The Inhabitants of *St. Laurence* have a Custom to put the first that falls from the Tree, without Incision, into little Shells cut in two, which they cover with a great Leaf, like a Sort of Palm Leaf; and that is what some Authors mean, when they speak of *Gum Tacamahaca Sublimis*, which ought to be dry, reddish, transparent, of a strong Smell, inclining to that of Lavender, of a Taste somewhat bitterish; this Kind is what we call *Shell Tacamahac*. That which falls from the Tree by cutting, is what we have brought in the Mass or Lump, and sometimes in Tears, in Figure resembling *Indian Frankincense*, which is to be chosen as full of white Drops, clean, dry, and as near the Smell of the former as can be got. It comes near the Virtues of the former, for which Reason it is used to put in Plaisters. It is very good to soften Tumours, and ease all Manner of Pains in the Head, Nerves, Joints and Womb. It is inwardly given from half a Dram to a Dram against Vapours, but most commonly against Pains, for which it is so famous amongst the *Indians*, that they use it to all Pains whatsoever, if not attended with any great Inflammation.

Tacamahaca, vel Tacamaca, is a *Lemery.* Kind of hard, clear, fragrant Rosin, that is drawn by Incision from the Trunk of a great, thick, unknown Tree; call'd by *Parkinson* and *Ray*, *Tacamahaca*; by *J. Bauhinus*, *Tacamahaca Populo similis fructu colore Pæoniæ*;

or that like the Poplar Tree, with Fruit the Colour of the Peony. It resembles much the Poplar Tree; the Leaves are small and indented; the Fruit is of the Bigness of a Nut, of a red Colour, resinous, odoriferous, and contains a Stone almost like that of the Peach. This Tree grows plentifully in *New-Spain*, and several Parts of the *West-Indies*; the Gum is gather'd from the Tree after wounding.

We have two Kinds of it, one of which is brought over in Shells, that is soft and whitish, of a very pleasant fragrant Smell; the other in Lumps, and comes in Chests, which is nothing near so good, but for the most Part is very foul and droffy: Both yield a deal of exalted Oil and volatile Salt. The *Gum Tacamahaca* is digestive, resolute, neurotick, anodyne, cephalick, drying, being apply'd externally. There is an acid-Spirit, Oil and Tincture made from this Gum, which open Obstructions of the Womb and Mesentery; are anodyne and stomachick, taking a few Drops in any generous Liquor; or the Oil is good externally to smell to, and to anoint old running Ulcers with, to cleanse and heal them, as well as to discuss hard Knots and Tumours.

[The Tree which produces the *Tacamahac*, is the *Tacamahaca foliis crenatis, Sadelbouts Lignum ad Ephippia conficundum aptum.* Par. Bat. Prod. 379. *Tacamahaca Populo similis fructu colore Pæoniæ simili.* J. B. 1. 346. The Gum is of a very agreeable Smell, like that of Lavender and Angelica. We have it from *Madagascar* and *New-Spain*. It is principally used externally, and is in great Esteem for all Kinds of Pains among the *Indians*.]

32. Of Gum Ivy.

GUM Ivy is a liquid Rosin which hardens as it flows. This Gum *Pomet.* flows abundantly in the *Indies, Italy, Provence* and *Languedoc*, from the great Ivy that creeps or climbs upon Trees and Walls. Being at *Montpelier* in the Year 1680, and walking in the King's Garden, I perceiv'd an Ivy there that climb'd up a Bay-Tree, having on the top Branch a Piece of Gum of the Bigness of one's Finger, which I begg'd of Mr. *Chicameau's* Son, who gave it me; and after I had examin'd it, I found it like Glue, of a red Colour, a strong penetrating Smell, and unpleasant enough. After having kept it some time, it grew dry, brittle, and of a yellowish Colour, just as we have it come from *India* by *Marseilles*. Chuse the best dry'd, clearest, of a balsamick Smell; and take Care that you be not impos'd upon with the *Gum Abuchi*, which is sometimes sold in its stead, especially when dear. It is reckon'd proper to make the Hair fall, and for the Cure of Wounds.

Hedera



Tacamahaca.

OF Gums.
Book 8.



G. Ivy.

Plate 52.

Ivy climbing up a Bay.



G. Caranna.



G. Bdelium.

Hedera Arborea, or the *Ivy-Tree*, is a *Lemery*. Shrub, or Tree, whose Branches creep up and cling to the next adjacent Trees or Walls, and insinuate themselves into the Cracks thereof, and into the Chinks of Stones, where they will fix a deep Root. The Bark is wrinkled, Ash-colour'd, and the Wood hard and white. The Leaves are broad, large, corner'd, thick, smooth, green all the Year, and shining, of an astringent acrid Taste. The Flowers grow at the Extremity of the Branches, compos'd each of six strip'd Leaves, of a grassy Colour, succeeded by round Berries, that are a little fleshy, and as large as those of Juniper, dispos'd in Clusters, of a black Colour when ripe. They contain each five Seeds, furrow'd on the Back, and flat on either Side. The *Ivy* grows generally upon Walls, and yields Abundance of Oil, and some essential Salt. It is deterfive and vulnerary. The Leaves are apply'd to Issues to cleanse them from their *Sanies*. They are likewise boil'd in Decoctions for the Ear-ach and Tooth-ach.

There is another Sort of *Ivy*, call'd *Hedera Poetica* by *C. Bauhinus* and *Tournefort*, and *Hedera Dyonisias* and *Chrysocarpus*, whose *Ivy-Berries* are of a Gold Colour. The Leaves of this are not so angular, but only sharper towards the Top, less thick, hard and fleshy than those of the other *Ivy*, and not of so deep a Colour. The Berries are of a fine Gold Colour. This Species of *Ivy* is rarely met with in *France*. The Antients made Crowns of it, with which they crown'd their Poets, from whence it is call'd *Hedera Poetica*, the *Poets Ivy*; *Hedera Dyonisias*, aut *Bacchica*, because they made Use of this Sort of *Ivy* in their publick Rejoicings, and Feasts of *Bacchus*.

They make Incisions in the Trunks of the larger *Ivies* in the hot Countries, as *Italy*, *Languedoc*, and *Provence*, to make the Gum or Rosin flow, which hardens in a little Time, and which they call *Gummi Hederæ*, or *Gum-Ivy*. It ought to be of a reddish yellow, transparent Colour, of a strong Smell and an acrid aromack Taste. The greatest Part of it that is sold by the Druggists comes from *India* by *Marseilles*. It yields a good deal of Oil and Salt, and is used externally to the same Intentions as the former, and is sometimes put into the Ointment of *Althæa*.

[This is produced by the common *Ivy*, the *Hedera arborea*. *Tourn. Inst.* 613. *Hedera corymbosa*. *Ger.* 208. The Antients thought this Gum a Caustick and Depilatory, but Experience shews it is neither, but a powerful Resolvent and Discutient, and an excellent Ingredient in Plaisters and Ointments in such Intentions.]

33. Gum Caranna.

Pemet. THE *Caranna* is a Gum which flows from the Trunk of several

Trees, like the Palm Tree, which are plentiful in *New-Spain*. This Gum is brought us in the Lump, wrap'd up in Reed Leaves. It ought to be soft, of a greyish Colour, inclining to green, of a sweet Smell, and something aromack.

Some Authors observe, that there is a white *Caranna*, which I easily believe, as very probably it is of that Colour, when it is newly-fallen from the Tree, and only becomes of the Colour we see, by Reason of its Age; the whiter it is, therefore the more valuable: But have nothing to do with several hard Gums that are offer'd in its stead, because of its Dearness. This Gum apply'd in a Plaister upon the Head, is admirable to abate the Pains thereof, as well as those of the Joints. And this Gum has such fine Qualities, that it is usually said, *What Tacamahaca cannot cure, Caranna can.*

The *Americans* compose a Balsam from this Gum, which they use with good Success for the Cure of Wounds and Hemorrhoids in this Manner: They take fine Turpentine half an Ounce, liquid Amber three Ounces, *Caranna*, *Mastic*, *Myrrh* and *Aloes*, of each two Ounces, *Copal*, *Tacamahac*, *Incense*, *Dragon's Blood* and *Sarcocolla*, of each a Dram and a half. Dissolve the Gums and Rosins upon the Fire, and after incorporate them with the Powders. Gum *Caranna* is mightily commended for its Faculty of discussing or asswaging hard Tumours: It is also apply'd to the Temples upon small Plaisters or Patches in the Head-Ach, or to prevent and restrain the falling down of the Humours upon the Eyes and Teeth. There is also prepar'd from it an excellent antidodagrick Plaister to be apply'd to gouty Swellings.

It is call'd *Caranna Gummi*, or *Caragna*, from *Cartagena* the Place of its *Lemery*. Production in the *Spanish West-Indies*, where it is in great Plenty, flowing out of a Tree cut or wounded. It is a hard Rosin, clammy but not glutinous, softish and tough, of a dark olive Colour, inclining a little to a Musk Colour. It comes forth soft, but condenses afterwards, not much unlike *Tacamahaca*, but more odoriferous and sweeter, and of something a brighter Colour; it comes wrap'd up in its broad fibrous Leaves like Reeds.

It is a famous Cephalick, Neurotick, Arthritic and Vulnerary; eases all manner of Pains in any Parts of the Body, proceeding from a cold and moist Cause, strengthens weak Limbs, and is accounted excellent to stop Defluxions from the Glands, being apply'd Plaisterwise to the Temples. It eases the Spleen, and dissolves the Hardness thereof, mollifies Swellings, and cures green Wounds, chiefly of the Nerves and Joynts: Dose inwardly from a Dram to two Drams. There is a Spirit, Oil and Balsam made from

Caranna: The volatile Spirit is aperitive, and opens Obstructions of the Reins, &c. Dose from ten Drops to twenty in any proper Liquor. The Oil is good against Lameness, Pains, Aches, Convulsions, &c. anointed upon the Parts affected. The Balsam is excellent to heal and consolidate Wounds, to strengthen the Nerves, &c.

[The Tree which produces the *Caranna* is the *Ilahueliloca Quabuith*, i. e. *Arbor Infantie Caragna Nuncupata*. Hermand. *Caranna*. Jonf. Dendr. 356. The Gum, or rather Rosin, is brought from the Province of *Mechoacana* in *America*. A Plaister of it, as broad as a Shilling, laid to the Temples, is by some said to be an infallible Remedy for the Tooth-ach.]

34. Of Gum Bdellium.

Pomet. **B***delium* is a Gum which flows from the Trunk of a thorny Tree, whose Leaves are like those of the Oak, and the Fruit like the wild Fig; it is brought to us from *Arabia Felix*, and the *East-Indies*; it should be chosen in clear transparent Pieces of a reddish grey without, and the Colour of *English* Glue within, dry, clean, and of a good Smell; take Care not to buy Gum Alouchi in its Place, which is a black Gum often offer'd to Sale instead of the *Bdelium* when it is dear.

It is warm, desiccative, and fudorifick, and is given in Coughs and Diseases of the Lungs; it also dissolves the Stone, and provokes Urine taken in Powder from two Scruples to a Dram; but its principal Use is for the Mithridate, and other Galenic Compositions.

Bdelium is a yellowish or reddish Gum, that flows from a thorny Tree call'd *Bdelia*, growing in *Arabia*, *Media*, or the *Indies*. They say that it bears Leaves like those of the Oak, and a Fruit resembling the Wild-Fig, of a pretty good Taste. This Gum is brought us in Pieces of different Sizes and Shape, but the finest is usually oval, or in Fashion of Pendants for the Ears, neat, clear, transparent, reddish, fragrant, and that easily softens, of a Taste inclining to bitter, it yielding a good deal of Oil and volatile acid Salt; is digestive, discussive, fudorifick, drying, aperitive, serviceable in the Empyema, to provoke the Terms, hasten the Birth, and to resist Poison; used both externally and internally.

[The Tree which produces the *Bdelium* is the *Quercinis foliis Arbuscula, spinosa, lactescens, Portoricensis*. C. B. Pin. *Arbuscula Portoricensis lactescens foliis Quercinis spinis Geminis, ad singulorum foliorum Ortum exasperata*. Hort. Baum. *Arbor Lactescens Aculeata foliis Quernis Americana Bdelli fera forte sive Arbor Bdellium ferens*

in *America*. Pluk. Phys. Tab. 145. There are two Kinds of this Gum in the Shops, one in large Cakes, reddish, and bitter, the other hard, brittle, of a darker Colour, and strong Smell. It is now brought from *Africa*, and is got in *Abyssinia* and *Æthiopia*; the Kind first describ'd is the best, and probably is what drops naturally from the Tree.]

35. Of Gum Sarcocol.

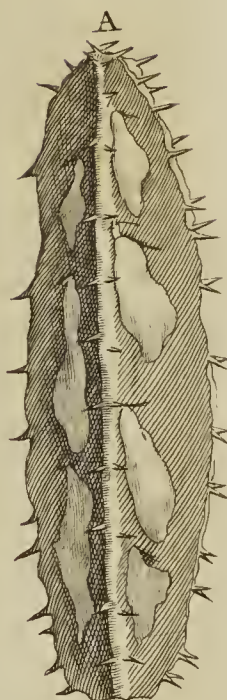
S*arcocol* is a Gum that flows from a little prickly Shrub, whereof the *Pomet*. Leaves are like *Sena*, of a white Colour tending to a yellow: Almost all Authors say, that these Shrubs grow in *Persia*; but two Friends of mine at *Marseilles* writ to me in *July* 1692 after this manner, that *Sarcocolla* was a Gum that is gather'd in the Deserts of *Arabia*, the Tree being little and very thorny; chuse that in Tears or Grains, of a white Colour, inclining to yellow or red, of a sweetish Taste, attended with an unpleasant Bitterness.

This Gum is wonderful in its Kinds, in that it flows from the Tree both without Incision, and by Incision, in Tears or Drops of different Colour and Bigness, white, yellow and red; which when they are dry, are granulated, as they are brought to us from *Marseilles*. There is besides another Sort of *Sarcocol*, which is in brown Lumps, and looks like a Composition; but I take it to be nothing but the damag'd Gum; however it ought to be thrown away, as also that which is very full of Dirt, and other Filth, to which it is much subject. This is very proper for curing of Wounds, which made the *Greeks* call it *Sarcocol*, which signifies *Flesh Glue*. It is consolidating and repelling, used chiefly to heal Wounds, stop Fluxes in the Eyes, and clear them from any Clouds, Films, Pearls, &c. that may hinder the Sight. It is good to purge the Head, and therefore profitable against Coughs, Shortness of Breath, especially in Persons that are flegmatick. Outwardly it is used against Inflammations of the Eyes, and to heal Ulcers in the Ears. The Fume thereof from Charcoal, receiv'd up the Fundament, cures the Piles, and other Diseases of those Parts.

Sarcocolla, or *Flesh-Glue*, is a granulated Gum, in very small Bits, spongy, *Lemery*. of a yellowish Colour, tending to white, resembling the broken Pieces or Remains of a Gum, or of *Frankincense* that have been grossly powder'd. We have it brought us from *Arabia*; where, as some say, it comes from a thorny Shrub, whose Leaves are something like *Sena*.

Sarcocol is of such a brittle Nature, that it moulders down into a gross Powder only by shaking or handling it; wherefore it is commonly brought over to us in small Grains, not much bigger

of Gums



The Euphorbium Berry.



bigger than Poppy Seeds ; yet sometimes we meet with some that are bigger and thicker. They are of several Colours, *viz.* white, brown, and red, of a bitter Taste, with a certain nauseous Sweetness : and being chewed between the Teeth, they become tough ; being held to the Flame of a Candle, they first boil or fry, and then send forth a clear Flame. It stops and prevents the Defluxion of Humours upon the Eyes, and takes away Spots, or white Specks over them, being steep'd in Asses or Womens Milk. Moreover, *Sarcocol* agglutinates Flesh, and conduces to the consolidating of spongy Wounds. There is an excellent Eye-Water made of *Sarcocol*, steep'd in Nurses Milk, with Mucilage of Quince Seeds made with Rose-Water.

[We have two very different Accounts of the Vegetable, whose Gum is the *Sarcocolla* ; the first that it is a thorny Species of Tithymal, found in *Persia* ; and the other, and more probable one, that it is a Siliquose Tree, with a Papilionaceous Flower. But 'till some Person of Judgment and Veracity has observ'd it on the Spot, there is no affirming any Thing of a Certainty about it. We have it from *Persia*, and in all Probability the Difference of Colour in the several Species of it, is owing to its different Age.]

36. Of Euphorbium.

Pomet. **E***uphorbium* is a Gum that flows from among the thick prickly Leaves of a Sort of Plant that is found in great Quantities in *Libya*, upon Mount *Atlas*, and in *Africa*. The Antients have writ variously upon the Nature of *Euphorbium*, and of the Manner of gathering it. Some saying that it flow'd by Means of wounding the Plant with Iron Instruments of a great Length, for fear of the Smell that was very mischievous, and that the Leaves being thus cut, there came forth a white Juice, like Milk, which was receiv'd in Sheep-Skins, spread under it for that Purpose. And others will have it that it was a thick Juice, from a Green Fruit of about the Size and Shape of our Cucumber. But those who have seen it, as well as myself, can attest it is no Juice, as supposed, but the Gum of a Plant. And besides, I can assure you 'tis so from the Sight of a Leaf, which is the Length and Thickness of one's Thumb, of a quadrangular Shape, each Corner of which is found full of sharp Thorns, at the Bottom of which is the *Euphorbium*, which is gain'd without any Incision, according to the Figure mark'd A. Chuse the newest, of a white Colour, inclining to Gold ; the least full of Dirt, the dryest and cleaneft that is possible.

There are Abundance of little Seeds to be met withal in *Euphorbium*, made in the Shape of

a Priest's Cap, very light, of the Colour of *Coriander*, in which is contain'd a little round Seed, like a Pin's Head, which some have assur'd me is the Seed of the very Plant which brings forth the *Euphorbium*. This Drug is not much used in Medicine, because of its immoderate Heat, and great Acrimony ; but much by the Farriers, being very good for the Farcy and Wind-Galls in Horses. The *Africans* use this Gum internally, but they wash it first in Poppy-Water, to abate the Heat of it.

Euphorbium being reduced into a fine Powder, which is a very difficult Task to do, is enclosed in a hollow'd Quince, which being cover'd over with a Paste, is baked in an Oven. It ought to be corrected with Vinegar, Juice of Lemons, or four Pomegranats ; or else with the Flegm or Spirit of Vitriol. By a chymical Analysis it yields a great deal of Oil, of a most stinking Smell, and a hot burning Taste ; moreover, an acid Flegm, and a sharp, concreted, volatile Salt are extracted from it. *Euphorbium* purges violently from five Grains to twelve, and is used against the Dropsy and lethargick Distemper. The Pills of *Euphorbium* of *Quercetan*, are prepar'd from it, being good against intermitting Fevers. It is used in the Pills of *Nitre* of *Trallianus*, and in *Mesue's* Pills of *Hermodytys*.

Euphorbium, so call'd from *Euphorbius*, Physician to King *Juba*, who *Lemery* first introduced it into Practice, and with it cur'd *Augustus Cæsar* ; is a yellowish Gum in little brittle Pieces, very acrid and burning to the Taste. It flows by cutting from a Sort of *Ferula* that bears the same Name. The Bark is hard and thorny ; the Leaves about the Length of a Man's Finger, and thick, of a quadrangular Form, garnish'd at each Angle with a great Number of little Thorns. It grows in *Libya*.

It is yellow and clear, in hollow Drops as big as Pease, and almost like *Sarcocol*, and is in Bladders as clear as Glass. Chuse that which is white, bright, pure, or yellow and sharp, which, with a small Touch, makes the Tongue burn. It is the better for being old, Age abating its Sharpness, which whilst fresh is not to be used. *Dodonæus* saith it is the Gum of a Plant. *Dioscorides* affirms, that it proceeds from a Kind of *Libyan Ferula*, being cut. It is adulterated with Gum *Sarcocol*, and Juice of *Tithymal* or *Spurge*. It purges serous and watry Humours, but is violently inflaming. It is administer'd with great Caution in Dropsies, Gouts, Pallies, and Green-Sickness ; for it powerfully opens the Womb, provokes the Terms, and brings away both Birth and After-Birth.

[The Plant which produces the *Euphorbium*, is the *Euphorbium verum Commelin*. *Euphorbium verum Antiquum*. R. Hist. 1. 873. Hort. Amst.

Amst. 123. *Euphorbium trigonum spinosum rotundifolium*. Act. Reg. Par. Anno. 1720.

When it is given inwardly, it is best dissolv'd in the Yolk of an Egg, and diluted with Oil of Sweet Almonds. Some venture it in Clysters, in the Quantity of twelve Grains, in Palsies and Lethargies, and it is sometimes used in Snuff.]

37. Of Olibanum, or Male-Frankincense.

THE Olibanum, which we usually call the *Male Frankincense*, is a Gum that flows, by Incision, from the Trunk of several Shrubs which are found plentifully in the *Holy Land*, and in *Arabia Felix*, where they grow in great Quantities, especially at the Foot of Mount *Lebanon*, from whence came its Name *Thus Libani Oleum Libani*, and by Corruption of the Language, *Olibanum*; it was also call'd *Frankincense*, because the Antients made Use of it for an Incense to their Gods. From *Arabia Felix* they transport it by the *Red Sea* to *Egypt*, from whence it comes to *Grand Cairo*, and from *Grand Cairo* to *Alexandria*, where it is embark'd for *Marseilles*. Several Persons write, that when they cut the Trunk of the *Frankincense-Tree*, and it begins to drop, no Body, except those who are of a certain reputed holy Family, may be permitted to gather it. Chuse the finest white Tears, inclining somewhat to a gold Colour, which being chew'd, make the Spittle white as Milk, and are of a bitter unpleasant Taste, throwing such aside as is full of Dust, and Leaves, and little yellow Pieces, to which it is very subject. Its Use is for several Compositions, as well Chymical as Galenical.

This *Olibanum* drops from the Tree plentifully, in roundish Drops, some bigger, some less, scarcely any of them exceeding the Size of a Horse-Bean; and it falls pure, without either Bark, Wood, or any other Thing sticking to it, and is of a yellowish white; the whiter it is, the more it is esteem'd. This resinous Gum strengthens the Bowels, stops Fluxes and the *Gonorrhœa* in Men, with the *Fluor Albus* in Women, taken from one Dram to two in Jelly of Isinglass. It is cephalick, cardiack and pectoral, comforts the Head, and revives the Memory, suppresses Melancholy and the Vapours, and abates vehement Coughing, Hoarseness and Catarrhs. The Fume taken up the Fundament, cures the Piles.

38. Of Moca Frankincense.

THE *Frankincense* of *Moca* is nothing else but a Kind of *Olibanum* in little Tears, or in the Mass, much

loaded with Dirt, of a reddish Colour, something bitter to the Taste, that is brought into *France* by the *East-India Company*; upon which Account it is call'd the Company's *Frankincense*, *Olibanum*, or *Indian Frankincense*. They never sell it but to counterfeit the former, and sometimes, tho' very improperly, for the true *Bdellium*.

39. Of the Manna of Frankincense.

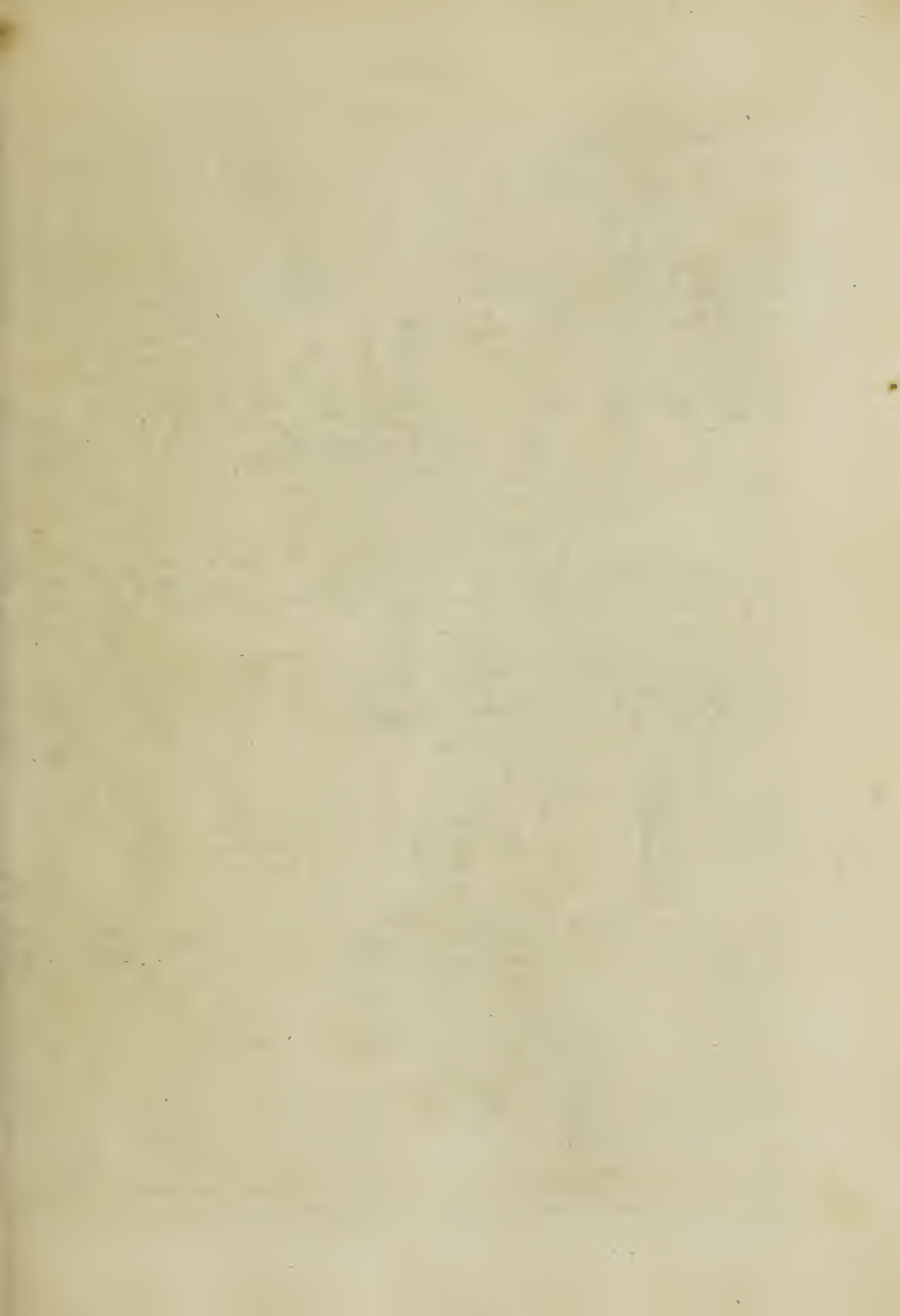
THE *Manna* of *Frankincense* is only a Number of little round Grains, that are clear and transparent, which are found in the *Olibanum*, and which are to be used for the same Purposes and after the same Manner as *Olibanum*.

Thus, or *Frankincense*, is a Kind of white or yellowish Resin, which yields a great Smell and Perfume, when thrown into the Fire; it is drawn by Incision from a little Tree, the Leaves whereof are like the *Lentisk*, and which grows plentifully in the *Holy Land*, especially about Mount *Libanus*. They call this Tree *Thus*, or *Arbor thurifera*; the Tree bearing *Frankincense*.

The first that flows from the Tree in clear pure Tears or Drops they call *Olibanum Melax*, *Thus Masculum*, or the *Male Frankincense*; that which falls confusedly on the Ground, and is sometimes mix'd with the Pieces of the Bark of the Tree, or with some other Impurities, is the common *Frankincense* which some call *Female Frankincense*; it is in the Lump, yellowish, soft, fat, very apt to take Fire, and odoriferous: That which is call'd the *Manna* of *Frankincense*, is the *Olibanum* in small Grain or Seed, that is round and pure, bearing the Colour of fine *Manna*; this Sort yields abundance of Oil and volatile Salt. The *Olibanum* is deterfive, a little astringent, sudorifick, proper for Diseases of the Breast, for the Pleurisy, to strengthen the Brain, for the scouring of the Guts, being taken inwardly, and is used externally to deterge and consolidate Ulcers. The common *Frankincense* is deterfive, and desiccative, being mix'd in Ointments and Plaisters.

The Bark of the Tree, from whence the *Frankincense* flows, is call'd *Thymiana*, *Thus Judæum*, or the *Frankincense* of the *Jews*: It is call'd *Thymiana* from smelling sweet in burning, because they burn this Bark in the Churches, or their Houses, to perfume them. It ought to be chosen thick, fat, or resinous; smooth, fresh and fragrant; it is deterfive and drying.

[We are not certainly inform'd what Tree it is which produces the *Olibanum*; *Theophrastus* calls it a small Tree with Leaves like those of the Pear-Tree; others have compar'd it to the *Lentisk*, and others to the *Acacia* Kind; and *Thevet*, who





G. Cancamy.



*Bal- sam of
Judea &c.*

*A Janiss a-
ding of Bal*



Balsam of Peru



*Balsam of
Tolu.*



*Balsam of
Capivi.*



Liquid amber.



New Balsam.

who in all Probability is most right of all, judges it to be of the Pine Species.

The *Olibanum* is brought to us from *Africa* and the *East-Indies*.

The *Thus vulgare* of the Shops is the dry Resin of the *Pinus sylvestris*, Ger. 1175. *Pinus sylvestris vulgaris Genevensis et Teda*, J. B. 1253. and the softer Kind, call'd *Thus fœmininum*, or common Incense, is only a thinner Sort of this, very much approaching to the Turpentine Kind.]

40. Of Gum Copal.

THE Gum Copal, which we call *Pomet*. *Oriental Copal*, is a clear, transparent Rosin, of a golden Colour, that flows from the Trunk of a Tree of a moderate Growth, adorn'd with Leaves which are green, long, large, and pointed; and with a Fruit that is like our Cucumbers, of a dark Colour, in which is to be found a Meal, or Flour, of a very good Taste.

Chuse this Rosin in fine Pieces, of the most beautiful yellow Colour, clear and transparent, that is easy to break or crumble; and which, when put into the Fire, melts presently, and yields a Smell like that of *Olibanum*. This Rosin is very seldom brought into *France*, and therefore its Use is little known, altho' it is often met with in both the *Indies*. But in the Room of it we have another Gum Copal brought from the *American* Islands, which some improperly call *Karabe*. This Gum flows, without cutting, from the Trunk and Branches of several large Trees, like our Black Poplars, that grow plentifully upon the Mountains of the *Antilles*, from whence it is brought along the Rivers, by means of the Rains and Torrents of Water that pass by the Roots of these Trees, where this Gum falls naturally. Its Use is to make Varnish of, with Spirit of Wine, and to sell instead of the true *Karabe*, tho' very improperly, because it is scarce any thing like it; smells little when burnt, and is therefore no ways useful to allay the Vapours: Besides, it is so like the Gum *Senega*, that there is nothing but the Colour, and the not dissolving in Water to discover the Difference by.

[The Tree which produces the Copal, is the *Copalli quavith Palahoca sive arbor Copallifera latifolia sive secunda*, Hern. 46. *Rhus Virginianum Lentisci foliis*, R. Hist. p. 1799. It grows both in the *East* and *West-Indies*.

The *Indians* call all transparent odoriferous Gums Copal; and *Hernandez* has described eight Kinds of Copal Trees; but the Species here mention'd, is that which produces the Gum we use, under that Name, which only differs in Colour according to its Purity, and to the Climate in which the Tree grows. It is not much used in Medicine, but is in great Esteem among the Varnishers.]

41. Of Cancamum, or Gum Cancamy.

THIS is a Drug that is controverted even to this Day; some affirming *Pomet*. it to be Gum Lac, others Myrrh, Benjamin, and Turmerick. But Mr. Brisot, a Physician at Paris, at his Return from his Voyage to the *West-Indies*, brought into *France* a Gum of four different Colours; the first Amber-colour, the second blackish, the third the Colour of Horn, to which was fasten'd a dry white Substance which was what we sell by the Name of Gum Animæ; this a great many People scarcely believe, notwithstanding *Dalechamp*, and others, have mention'd it; but I can attest the Truth of it, having a Piece by me of the Size of one's Finger, where the four Sorts of Gums are sticking together.

The Tree that bears these four Sorts of Gums is of a moderate Height, and the Leaves like those of Myrrh; it grows every where in *Africa*, *Brazil*, and in *St. Christopher's*, from whence this Piece came, which was given me by a Friend the 30th of July 1686, who had it of a Person of the first Quality, to whom it had been sent by one of the Governors of *St. Christopher's*: That which resembles Amber, being burnt, dissolves, and has the Smell of Gum Lac; the second, which is black, melts as the other, and has a much sweeter Smell, the third, which is like Horn, is almost without Smell; the fourth is the Gum Anime: But since we have none comes to Paris but the Anime Kind, chuse such as is white, dry, brittle, and of a good Smell. This Gum is very little used in Medicine, tho' endow'd with a great many good Qualities, being a natural Balsam. Some would put off, tho' very wrong, Gum Anime for Gum Elemi; for there is a great deal of Difference, the Anime being hard and white, the Elemi moist and greenish.

Gummi Copal, sive Pancopal, is a soft Gum, of a very good Smell, of a white Lemery. yellowish Colour, and fragrant, brought from *Hispaniola*, and other Places of the *Spanish West Indies*. Some Authors have thought this Gum and Gum Anime to be all one; they may possibly be comprehended under one Genus; but I am confident that Copal is a Species different from the other; for Copal is a fine, clear, transparent, white Gum, in somewhat greater Pieces, and very odoriferous, tho' not altogether so sweet as the Anime is; and with this Copal it is that the *Indians*, instead of Incense, perfume their Sacrifices in their Temples, as the *Spaniards* observ'd when they first came among them.

Gum Anime is also a whitish Gum, but is fatter. Gum Copal is more pure, clear, and white, and not so fatty as the other; so that of the two, the Copal is indeed the more excellent in Substance;

stance ; but the *Anime* is the more odoriferous, and to be chosen before the *Copal*, if it be for a medicinal Use ; but the *Copal* is to be chosen before the *Anime*, if for any other Purposes.

Cancaum is a very scarce Gum, which is clotted, and resembles several Sorts of Gums or Rosins united, or sticking close one to the other, as one entire Gum. Some will have it to be a Species of Amber, others of *Gum Anime*, some of Benjamin, and some again of *Lac* ; whereas all the *Cancaum* we know comes from *Arabia*, and most of the others are unknown there ; so that it rather appears to be a singular Species or Kind of itself, and the true Rosin of a Tree growing in *Arabia*. As to its Virtues, Experience confirms that it strengthens the Stomach and Bowels, kills Worms, and opens Obstructions of the Spleen. You may make a good Varnish by dissolving it in Spirit of Wine tartariz'd, or good Spirit of Turpentine, as you make Varnish of *Gum Anime*, or of Seed and Shell *Lac*.

[We are altogether ignorant what was the true *Cancaum* of the Antients ; some have thought they meant Myrrh by this Name, and others, with more Probability, *Gum Anime*, which is produc'd by the *Animi fera Arbor Brasiliiana*, Herm. Par. Bat. Pr. 312. *Anime Cancaum Græcorum*, Mont. Exot. 11. *Acaciæ quodammodo accedens Arbor Animæ Gummi fundens Americana foliis magnis acuminatis in pediculo binis Lobo magno, erassissimo Eduli*, Breyn. Prodr. 2. 8. Courbaril. Plum. N. G. 49. It grows in *New Spain* and *Brasil* : The Gum has the same Smell and Virtues with the *Copal* ; and it is also to be observ'd, that the Word *Anime* among the *Indians* comprehends as many Gums as *Copal* ; but the Tree here mention'd, produces what we receive and use under that Name.]

42. Of Gum Lac in the Stick.

THE natural *Gum Lac*, or that in *Pomet*. the Stick, is a reddish Gum, that is hard, clear, and transparent, which is brought us adhering to little Sticks or Reeds, of the Thickness and Length of one's Finger, from the Kingdom of *Pegu*, where it is found in great Quantities.

The *Sieur Rousseau*, who was a long Time in the *Indies*, in *Persia* and *Pegu*, where they gather this *Gum Lac*, says, that in those Parts there is a vast Quantity of Insects, like our common Flies, that gather together the Dew which is found on several Trees after the same Manner as we observe our Bees ; and when they are full of this Dew, they discharge it upon whatever they meet with : That the Inhabitants of those Places stick up Branches of Trees, Sticks or Reeds, as we do here in the Ground for Pease, or the like, to

run upon, that the Flies may discharge their Loads of Dew upon those Sticks, and the Sun dries them to a Gum that is hard and dry, just as we see it ; which is not improbable, since the *Lac* we have brought over, sticks upon Pieces of different Wood, and likewise upon little Reeds : Besides, it is easy to see that this Gum does not flow from these little Pieces of Wood on which it is found sticking ; because there are no Appearances from whence such a Matter should proceed. The said *Sieur Rousseau* has assured me that the lower End of the Body of these Flies, put into Spirit of Wine, makes the most beautiful Red imaginable ; and that it was the Tip of these Flies that might be call'd the Animal *Cochineal*, and not the *Mestick Cochineal*, which we have treated of before.

When this Gum is in Perfection, they gather these small Sticks loaded with it, which they keep to make a Tincture of, and to trade with several Nations, especially with the *Dutch* and *English*, from whence we have it ; and this is what we call *Stick-Lac*. Chuse this Gum clear and transparent, such as melts well, the least full of Sticks, black Gum, and other Filth, to which it is very subject, and such as being chew'd, tinges the Spittle red, and boil'd in Water, with any Acid, produces a fine scarlet Colour. 'Tis with this Tincture that the *Indians* stain their Linnen, and the People of the *Levant* what we call *Turkey-Leather* ; and the *Indians* make the Wax we name from thence *Indian-Wax* ; the *Dutch* and *English* make Scarlet of it.

When the *Dutch* and *English* would clear what there is good from the *Stick-Lac*, they grind it slightly in a Mill, and that which passes through the Linnen, they separate, which they use for Dying ; the Remainder is the grosser and worse Part, and is what they send to us (mix'd with what they have, by the Assistance of Acids, drawn the finer Tincture from, without changing its Figure, and dry'd) and call *Seed-Lac*.

It ought to be chosen such as melts well, and comes as near the Properties of the *Stick-Lac* as may be.

When they would make what is call'd *Shell-Lac*, they take the *Gum-Lac* off the Sticks ; and when it is melted, they cast it upon a Marble, and make it flat and thin, as we now see it : It is of different Colours according to the Fineness of the *Gum Lac* that was used ; but that which is almost black, is what has been made with such as had the Tincture drawn from it before. The *English* have brought into *France*, for many Years, a large Quantity of the finest *Gum Lac*, made in the Shape of Ears, whence it has receiv'd the Name of *Ear Gum* ; but of late there has been none of it seen. As to the Choice of *Gum Lacs*, the principal Thing is to have them such as will melt

melt well ; for all the *Gum Lac* that will not melt is good for nothing but to be thrown away, especially if design'd for *Spanish Wax*, which is the chief Use of it. As for the *Shell Lac*, it ought to be shining, clear, transparent, the least rugged, of the highest Colour, and the thinnest that may be. The third Sort, such as will melt best, ought to be the least burnt ; and as to the *Seed Lac*, the Makers of Sealing-Wax grind it in Mills, as they cannot melt it.

Lacca, or *Gum Lac*, is a hard, red, *Lemery*. clear, transparent Rosin, which is brought us from *Bengal*, *Malabar*, *Pegu*, and several other *East-India* Provinces, adhering to little Sticks about the Length and Thickness of one's Finger. They pretend it is made from the great wing'd Ants, or a Kind of Flies resembling our common Flies, which draw a Juice from the Substance of certain Trees, and discharge the same upon the Boughs of others, or else upon Sticks or Reeds, set up for that Purpose ; which being dry'd into a Gum, is call'd *Stick Lac*. You ought to chuse such as affords the highest Colour, neat, clear, a little transparent, that will melt upon the Fire when it is lighted, yields a pleasant Smell, and being chew'd tinges the Spittle of a red Colour ; and likewise boil'd in Water with any Acid, strikes a beautiful scarlet Dye. This Gum yields abundance of Oil, a little volatile Salt, some Earth and Phlegm ; it is incisive, penetrating, deterfive ; it purifies the Blood, excites Sweat, and Womens Courses ; facilitates Respiration, resists the Malignity of Humours, and strengthens the Gums.

They sell at the Druggists a flat *Gum Lac*, call'd *Shell Lac*, which differs not from the other, but as it is separated from the Sticks ; dissolved and cast upon a Marble, it looks like Glafs of Antimony. They have likewise *Lac* in Seed, or little Bits ; but usually it is not so good as the other, because it is often only the remaining grosser Parts of the Gum, after the *Dutch* and *English* have taken the scarlet Tincture off from it. This *Seed Lac* is used for Sealing-Wax. The *Indian* Sealing-Wax is made of the *Gum Lac* melted or liquified, and colour'd with Vermilion, and is much better than that made in *France*, because it is composed of choice *Gum Lac* ; instead of which, that of *France* is generally of the worst *Seed Lac*, Rosin, and Vermilion. The black Sealing-Wax is ting'd or colour'd with Smoke Black ; the yellow with Orpiment, &c.

They give the Name of *Lac*, or *Lake*, to several Kinds of dried Pastes, or Crayons, which the Painters use to paint in Miniature, and in Oil. That which is call'd fine *Venetian Lac*, is made with Mestick Cochineal, which remains after drawing off the first Carmine : These they prepare better at *Paris* than *Venice*, and make them

up in little, soft, brittle Troches, of a deep red Colour. That which is call'd *Dove Lac*, or *Flat Lac*, is made with Shavings of Scarlet, boil'd in a *Lixivium* of white Pot-Ashes, Chalk and Alum, which they form a Paste of, and make into Tablets to dry ; the best is made at *Venice*. There is a certain Tincture made of *Brasil Wood*, which the Painters call *Liquid Lac*.

43. Of Indian Wax.

THE *Indian Wax* is made of Gum *Lac*, melted and colour'd with *Pomet*. pale Vermilion, and afterwards form'd into round or flat Pieces, in the Manner as we now have them. Chuse such as melt well, are smooth, the least full of brown Spots, and of the highest Colour you can get. This Wax is of no other Use than to seal Letters, and it ought to be this which bears the Name of the true Sealing-Wax, and not that which is mix'd and traded with at *Paris*, which is no other than the *Seed Lac*, ground and incorporated with melted Rosin, and colour'd by the Addition of a little Vermilion, and so sold amongst us. And as this Wax is of a base Colour, because they put in very little Vermilion, they cover their Sticks over slightly with a good shining Red ; which Cheat is easy to discover by breaking the Sticks, and seeing that they are not of the same Colour within as without. I wonder why this Kind of Wax should be so falsely call'd *Spanish Wax*, since the *Spaniards* never make it, but are entirely ignorant of it. There are several other Sealing-Waxes made of other different Colours, as black, yellow, &c. besides perfum'd Wax, that is made by adding a little Civet or Musk to the Composition.

[This common Opinion of the *Gum Lac* being left on Sticks, &c. by Flies, which is also countenanc'd by *Garzias* and *Bontius*, who both say, that it is form'd in that Manner by what they call a Species of large wing'd Ants, seems repugnant to Reason and the common Course of Nature, and is not believ'd by many very eminent Authors, among whom *John Bauhin*, and the late celebrated Mr. *Ray*, are of Opinion that it is the natural Gum ouzing from the Branches of the Trees we have it found on. *Herman* has describ'd several *Lacca-Trees* ; but what we have brought into *Europe* is gather'd from the *Fujuba Indica*, Rai. Hist. 2. 155. *Fujuba Indica rotundifolia Spinosa, foliis majoribus subtus lanuginosis et incanis*, Breyn. Pr. 2. 60. Commel. Flon. Mal. 149. *Zizyphus Indica Argentea tota*, Herm. Mus. Zeyl. 8. 37. which is plentiful in *Malabar*, and many other Parts of the *East-Indies* ; and I think there can be no great Difficulty in deciding the true Origin of this Drug, when *Herman* affirms that he has himself often procur'd a fine red and transparent

sparent *Gum Lacca*, tho' in small Quantities, from Incisions which he made in the Bark of this Tree. The Puncture made in the Bark by Flies and Ants may indeed very much facilitate the flowing of this Gum; and hence, I suppose, grew at first the Opinion of their leaving it there: Nay, tho' we should allow Mr. *Geoffroy* the Truth of what he supposes, as to its being the Nests of these Insects, and their Eggs being found in some of the Cells of it, I cannot see that he need think that a Proof of the Matter's being brought thither by them, any more than that the Substance of a Gall is brought and lodg'd upon an Oak by a Fly, because the Egg, or *Eula*, of a Fly is found in it: Allowing therefore the Truth of these Eggs being sometimes found in the Cells of the *Lacca*, as I must acknowledge I have sometimes found Bodies that had that Appearance, I think it rather a Proof of, than an Objection against, what I believe as to the Origin of the *Lacca*, which is, that Nature has instructed a certain winged Insect to pierce the Bark of the *Jujuba Laccam fundens*, as I would call that Species we have the *Lacca* from, and there to leave its Eggs, where a proper Juice would soon naturally flow over them, and defend them from external Injuries 'till the Time of their hatching.]

44. Of Balsam of Judæa, or Balm of Gilead.

Pomet. THE Balsam of Judæa, which we usually call *Opobalsamum*, *Balm of Gilead*, *Egyptian Balsam*, or *Balsam of Grand Cairo*, is a liquid white Balsam, that flows during Summer from the Trunk of a Shrub, that bears Leaves like Rue, and white Flowers shap'd like Stars; in the Middle of which rise little Berries, that are sharp at the End, in which is a small Kernel; this little Fruit we call *Carpobalsamum*; it sticks to the Branches by means of a small Stalk, is green at the beginning, and grows brown as it ripens.

Jericho was once the only Place in the World where this true Balsam was to be found; but since the *Turks* have been Masters of the *Holy Land*, they have transplanted this Shrub into their Gardens at *Grand Cairo*, where they are guarded by several *Janissaries*, during the Time the Balsam flows. A Friend of mine, who has been at *Grand Cairo*, assured me, that no body, unless by looking over the Walls, could get a Sight of these Shrubs, which are defended by very high Walls, as well as Soldiers, from any Christians entering. And as to the Balsam, it is almost impossible to get any upon the Place, unless it is by means of some Embassador at the *Porte*, to whom the Grand Signior has made a Present of it, or

by the *Janissaries*, who watch this precious Balsam; by which we may understand, that what several Cheats pretend to sell for true *Balsam of Gilead*, is nothing but white Balsam of *Peru*, which they prepare with Spirit of Wine rectified, or with some distill'd Oils.

But it is met with sometimes in the Cabinets of the great Lords. In 1687 there happen'd to be a Quantity sent to *Madam de Villefavin*, which was found to be about fourteen Ounces in two Leaden Bottles, as it came from *Grand Cairo*, which was sold to a Person who let me see it; we found it to be very hard, of a Golden yellow Colour, and a Citron Smell: But since that, a Friend of mine gave me one Ounce, which he brought himself from *Grand Cairo*, and which was of a solid Consistence, like that of Turpentine of *Chio*, and of a fragrant Smell, which is the true Sign of its Goodness.

45. Of Carpopbalsamum.

THE *Carpobalsamum* is as I have said, the little Fruit of the Balsam-Shrub; these, to have their due Qualities, ought to be new, and of an aromattick Taste, and a pretty pleasant Smell. They are of some medicinal Use, but principally for the great Treacle, wherein they require no other Preparation than to be chosen true, and freed from their Stalks, empty Shells, and such as are Worm-eaten amongst them. *Pomet.*

46. Of Xylobalsamum, or the Balsam-Wood.

THIS is the Trunk and Branches, stripp'd from the Leaves and Seed of the Balsam-Shrub, which we have brought in little Faggots, from *Cairo* to *Marseilles*; for they every Year prune the Balsam-Shrubs as we do our Vines, and bind up the Cuttings for Sale; for the *Turks* love rather to make Profit of it, than burn it. Chuse your *Balsam-Wood* in little Rods, full of Knots, reddish without, and white within, the most resinous and aromattick that can be got. The chief Use of it is in the Troches of *Hediceroy*, without any other Preparation than the Choice abovesaid. *Pomet.*

47. Of Balsam of Mecca.

THE *Turks*, who go a Pilgrimage every Year to *Mecca*, bring from thence a certain dry white Balsam, in Figure resembling white Copperas, especially when it is stale. The Person who made me a Present of about half an Ounce, assur'd me, that

he brought the same from *Mecca* liquid, and that the Smell is the same as that of the Balm of *Gilead*. The same Person likewise did testify to me, that it was as good as the Balm of *Gilead*.

There is a Tincture and Spirit of Balm of *Gilead*; the Tincture is a great Secret in the Venereal Disease; the Spirit is of great Value, by Reason of its balsamick Virtues, being beneficial to the nervous and membranous Parts; it contains a volatile, subtile, and deterfive Salt, which mundifies strongly, by which it takes away the Viscosities, Impurities, and other Diseases of the Lungs, Ureters &c.

Balsamum Judaicum, Gileadense vel Lemery. rum Ægyptiacum, Syriacum, de Mecca, the true Syrian Balsam or Balm of *Gilead*; proceeds from a small Tree or Shrub that once grew nowhere but in the Valley of *Jericho* in *Gilead*, and in *Arabia Felix*; but since the *Turks* have been Masters of that Part of the World, they have transplanted these Trees into other Parts, where no Christians are permitted to approach, by the Command of the Sultan, who has appointed Soldiers to guard every one of these Trees perpetually. This Tree rises to the Height of Shrub-Trefoil, bearing a few Leaves like those of Rue, or rather like the Leaves of the Mastick-Tree, being always green, and consisting of three, five, and sometimes of seven Wings. The Branches are odoriferous, resinous, and tough; the Flowers are of a white Colour, inclining to a Purple, not much unlike those of the *Egyptian* Thorn, or *Acacia*, of a very fine fragrant Smell; the Seeds are yellow, contain'd in Cods that are of a blackish Colour, inclining to red, being of a sweet Smell, a pungent and bitter Taste, pouring forth a yellow-colour'd Moisture like Honey: The Fruit of this Tree is call'd *Opobalsam*; and the Liquor issuing from it is call'd in the Shops, the Liquor of *Opobalsam*; and the Wood of the Tree *Xylobalsam*, or *Balsam-Wood*, which is cephalick and stomachick, resists Poison, and drives away any Contagion. It is prescrib'd in several pharmaceutical Dispensations, and may be used instead of Yellow Sanders, or Wood of Aloes. The *Carpobalsam*, or Fruit thereof, is alexiterial, proper to strengthen the vital Parts, to excite the *Semen Virile*, to cure the Biting of Serpents, and other venomous Creatures; but as it is scarce, *Cubebs* are used in its Stead.

There flows, in Summer-time, from the Trunk of this Balsam-Tree, being cut, or the Boughs lopp'd off, a liquid Rosin that is white and fragrant, call'd in *Latin*, *Opobalsamum*, *Balsame-læon*, *Balsamum de Mecha*, *Balsamum verum Syriacum*, *Balsamum album Ægyptiacum seu Judaicum*. As this Balsam is scarce, dear, and precious, it is apt to be mix'd and adulterated. It ought to be of a Consistence very near like that

of Turpentine, of a whitish Colour, inclining to yellow, transparent, of a penetrating and pleasant Smell, the Taste a little bitter and acrid. It yields abundance of Oil that is half exalted by the volatile Salt. If for Curiosity one would make a Distillation of it, in the first Place we shall find an ethereal Oil, then a yellow Oil, and at last a red Oil, such as is to be met with in Distillation of Turpentine. But as this white Balsam is a natural Drug so exalted, that it stands in need of no Assistance from Chymistry, it is much better to use it in its natural State. To know if this Balsam is true and fresh, pour some Drops of it into a Glass of Water, and it will spread itself delicately upon the Surface, and afterwards be easily collected together by the End of a Stick entirely from the Water; but if this Balsam be old, tho' it be true, it gains a firmer Consistence and Solidity, so that it does not swim or float upon the Water, but will precipitate to the Bottom.

This white Balsam is the most essential Part of the Tree, and is the most valuable Medicine to fortify the Heart and Brain. The Dose is from two Drops to five or six. And it is likewise given inwardly to deterge and consolidate Wounds, strengthen the Nerves, and to heal Ulcers of the Lungs, Consumptions, Catarrhs and Phthisicks, so that there is scarce a better Thing in the World. The Ladies use it for a Wash, and mix it with a little Oil and the four cold Seeds, to soften the Roughness of the Skin; besides which, it takes away Pimples and Blotches in the Face. Some dissolve it in Spirit of Wine, or *Hungary* Water, and so mix it with Snail Water, or Bean Flower Water, to make a Virgin's Milk or Wash of.

[The Tree which produces the Balm of *Gilead*, is the *Balsamum Syriacum Rutæ folio*, C. B. Pin. 400. *Balsamum ab Ægyptiis Baleffan*, Alpin. Ægypt. 60. and the Wood and Fruit of the same Tree are the *Xylobalsamum* and *Carpobalsamum*. The true Balm of *Gilead* is a resinous Liquor which at first is of the Consistence of Oil of Sweet Almonds; but by Age loses its Smell, and sometimes its Colour, and becomes thick as Turpentine; when fresh, it has the Smell of Citron Peel.

M. Lippi, Embassador from *Lewis XIV.* of *France* to the Emperor of the *Abyssines*, being in *Egypt*, took great Pains to discover the Plant, and the Ways of procuring the Balsam from it; he found there were three Ways of collecting it, and that the three Liquors collected differ'd accordingly; the first, and finest, was catch'd as it flow'd spontaneously from the Tree; the second was procur'd by Incisions, and the third by boiling the Tops of the Trees, which first yield a very fine Balsam, and afterwards a coarser. The Balsam which flows spontaneously from the Tree is all sent

to the Grand Signor's Scraglio, the others are suffer'd to be exported.]

48. Of Balsam of Peru.

Pomet. WE sell at *Paris* three Sorts of Balsams by the Name of Balsam of Peru; to wit, The *White*, which is called, the Balsam by *Incision*; that in the Shell, which is called the *Dry Balsam*, and the *Black Balsam*. This first is a white Liquor, altogether like the *Bijon*, of which I shall treat in the Chapter of *Turpentine*, that distils from the Trunk and large Branches of certain Shrubs, whose Leaves are represented in the Figure of Balsam of Peru, which Tree grows plentifully in *New Spain*, &c. The second is the Balsam in the Shell, which drops from the Branches that are cut, at the Ends of which they hang Shells, to receive a kind of Milk that falls into them after the same manner as the Vines yield a clear Water. When these Shells are full, they place others in their room, continuing so to do 'till the Trees will yield no more; then they expose, or set these Shells, in hot Places for some Days, that the Milk may congeal or harden, and change its Colour. The third is the *Black Balsam*, which is made by boiling the Bark, Branches and Leaves of these little Trees in Water; after they are boil'd some Time, taking the Whole from the Fire, and gathering off the Fat that swims at Top, which is of a blackish brown Colour, and is what we call *Black Balsam of Peru*.

The first and finest Kind of all being that which distils from the Branches, is a hard Balsam, which, to have its requisite Perfection, ought to be reddish, the most fragrant and dry that may be. Its Use is as well in Medicine, as to make a Virgin's Milk abundantly more odoriferous than that which is made of *Benjamin* and *Storax*. Several Persons have assured me, that the Balsam in the Shell was a Composition of *Benjamin*, *Storax*, and Balsam of Peru, which I never could find to be true from several Trials that I have made. However, with this Balsam, and some other Drugs, is composed the Balsam of Monsieur the Governor of *Berne*, which I shall communicate to the Publick, because of its many great Virtues.

After that the Branches will drop no more they cut the Trunk, and from thence flows a white Humour, that is as clear as Milk; which, to be right and true, ought to be white, and as like the *Balm of Gilead* as may be. This Balsam is of no other Use, that I know of, but for Wounds, or to sell instead of the true *Opobalsamum*; though there is a vast Difference, in that the true *Opobalsamum* has a Citron Smell, which is not to be met withal in the white Balsam of Peru.

49. The Manner of making artificial Balsam of Peru.

I Have been inform'd by many Persons, that the *Black Balsam of Peru* is *Pomet.* a Composition made by the *Portuguese*, who sell it to the *Dutch*, in the following manner: Take fine Turpentine, white Frankincense, of each one Pound; Oil of *Ben*, *Olibanum*, *Labdanum*, *Gum Elemi*, of each six Ounces; Lavender Flowers and Nutmeg, of each four Ounces; Spikenard, Wood of Aloes, of each two Ounces; Myrrh, Aloes and Dragon's Blood, of each one Ounce and Half; the little Valerian Orrice, long Birthwort, *Acorus Verus*, Mace, Benjamin, Storax, of each one Ounce; Zedoary, Galingal, Cloves, Cinnamon, Castor, and Mastich, of each six Drams: Powder all the Drugs grossly, then melt the Turpentine, Frankincense, Gum Elemi, and Oil of Ben over the Fire, and when they are dissolved, incorporate the Powders; and when they are made into a Paste, put them into a Glass Retort, whereof one third Part is empty; and after it is well luted and dry'd, set it upon a Sand-Furnace; and when the Matter begins to heat, there will flow a clear Water, then an Oil of the Colour of Gold, at last a black Balsam, tending to red, which some would have to be what we sell by the Name of *Black Balsam of Peru*. The Water is proper to be taken inwardly, by those who have the Falling Sickness, Convulsions, Weakness of the Stomach, and to correct Wind. The Oil is good for the Palsy, Nerves that are wounded, Pains in the Joints, rubbing them with it hot. As to the Balsam, it has the same Virtues with that of Peru.

50. The Balsam of the Governor of Berne, given me by Mr. Pimodan, the King's Lieutenant of Toul in Lorrain.

TAKE dry Balsam of Peru, one Ounce; Storax in Tears, two *Pomet.* Ounces; Benjamin, three Ounces; Aloes Succotrine, Myrrh, Olibanum in Tears, Roots of *Bohemia Angelica*, Flowers of St. John's Wort, of each Half an Ounce; Spirit of Wine, one Quart; beat all together, and put them into a Bottle well stopp'd, which hang in the Sun in the Dog-Days.

The Virtues of this Balsam, according to the Original given me by the said Mr. Pimodan.

First of all, it is an admirable Balsam for all Kinds of Wounds; it is also excellent, given inwardly, in the Cholick, taking four or five Drops of it in a Glass of Claret. It is also sovereign in the

the Gout, applied to the Part affected, with a Feather or Cotton. For the Tooth-ach it is wonderful, apply'd to the Teeth with Cotton that has been steep'd in it. It cures all Sorts of Ulcers, Cancers and Shankers; cures the Biting of venomous Creatures and mad Dogs; is good to prevent the Marks of the Small-Pox, by rubbing the Pimples as they appear upon the Face. It is excellent for the Piles, Inflammations of the Eyes, Pains of the Stomach, and likewise to provoke the Terms, taken five or six Drops in hot White Wine.

Balsamum Peruvianum, seu Indicum, Lemery. or *Balsam of Peru*, is a natural Balsam, whereof there are three Sorts or Species. The first, call'd the *dry Balsam*, is a Sort of hard, reddish, fragrant Rosin, which is brought us in the Shell. [*Produced as describ'd in Pomet.*] The second is a liquid, white, smelling Rosin. And the third is a black, odoriferous *Balsam*, which is the most common, and most in Use of all the others, as well in Physick as for Perfumes. It ought to be viscous, and of a Turpentine Consistence, of a blackish brown Colour, a sweet and agreeable Taste, having some Analogy to *Storax*. These *Balsams* are proper for the Brain and Stomach, to drive malignant Humours off by Perspiration, to deterge and heal Wounds, to strengthen the Nerves, and to resolve cold Tumours. The Dose from a Drop to four or five.

[The Tree which produces the *Balsamum Peruvianum* is the *Hoitziloxitl, sive Arbor Balsami Indici, sive Balsamifera*, Hern. 1. 51. *Caburciba*, Pis. 57. *Hoitziloxitl Mexicanorum*, Jons. Dendr. 309. which grows in *New Spain*, and other Parts of *America*. The *Black Balsam*, which is almost the only Kind now in Use, is procur'd as describ'd by Authors, by boiling the Tops of the Tree; but the *White* is the Production of another Species of the *Peruvian Balsam Tree*: It flows by means of Incisions, from the *Hecaconex sive Balsamifera secunda*, Hern. 52. which grows plentifully in *Peru*.]

51. Of Balsam of Copyba, or Capivy.

Pomet. **T**HE *Balsam of Capivy* is brought us two ways, to wit, in a clear Oil, and a thick. And this Difference arises only from the Difference of the Time in which it flows from the Tree; for that which comes first from the Incision that is made in the Tree, whose Figure is represented in the Plate herewith, is a clear Oil, that is white, and of a resinous Smell; and after that distils another Sort, that is of a golden Colour, and thicker, which gives it the Name of a *Balsam*. This is usually brought from *Portugal* in earthen Bottles, sharp and narrow at the End, in which is often found a Moisture,

which occasions it to separate, and makes this *Balsam* whitish like Curd. The Tree grows in many Parts of *Brasil*, as *Rio de Janeiro*, *St. Vincent*, and *Fernambouc*. The Natives know not a better Remedy for all Sorts of Wounds, than their *Colocai*; for so they call this *Balsam*: The *Brasilians* call it *Copaiba*, the *Portuguese*, *Gamelô*. It is a very admirable Medicine, both internally and externally used; being a Specifick in the *Gonorrhea*, and Womens Whites. The Natives found out the Virtue of this *Balsam* by means of certain Hogs in those Parts, who presently, when they were wounded, would strike their Teeth against the Trunk of these Trees, from whence the *Balsam* would flow out into their Wound; and this they would continue to do 'till they were perfectly well. The Wood of the Tree serves them to die red with, as well as that of *Brasil*.

Balsamum Copabu, Copau, Copalyva, Copais, Campais, Gamelo, or Balsam Lemery. of *Capivy*; is a natural Balsam flowing from a Balsam Tree, about *Surinam* in the *West-Indies*, hot and bitterish to the Taste, of an aromattick Smell, and clear transparent Body, like *Venice Turpentine*, but equal in Goodness and Virtue to most other natural *Balsams*. It comforts and warms a cold Stomach and Bowels, dissolves and enters into the whole Mass of Blood, depurates it from all its Feculencies, is an admirable Vulnerary, and a very good Thing against the Scurvy; opens Obstructions, and provokes Urine powerfully: It strengthens a weak Back, stops Fluxes of all Kinds; in a Word, provokes Sweat, and cures most Diseases which are to be remedied by sweating, doing whatever any other natural *Balsam* or *Turpentine* will do. Dose from twenty Drops to forty, twice a Day.

[The Tree which produces the *Capivi*, is the *Arbor Balsamifera Brasiliensis fructu monospermo*, Rai. Hist. 2. 1759. *Copaiba Brasiliensibus*, Marc. 130. *Copayva*, Pis. 56.

When the *Balsam* is new it is of the Consistence and Colour of Oil of Sweet Almonds, and smells like *Lignum Aloes*, but the Taste is pungent and bitter.

52. Of Balsam of Tolu.

BALSA**M** of *Tolu* is a Rosin that flows from the Trunks of Trees, by *Pomet*. means of cutting them. These Trees are found in great Quantities in a Province of *New Spain*, which is betwixt *Carthagena* and *Nombre de Dios*, call'd *Tolu*. The Balsam, as it flows from the Tree, is of the Consistence of *Turpentine*, and of a reddish brown Colour. The Inhabitants of those Parts tie at the Bottom of the Tree little Vessels made of the black Wax of that Country, or else a *Calabash*, to receive the Balsam;

sam; which, after it is fallen, hardens, and becomes much about the Consistence and Colour of *Flanders Glue* newly made.

This Balsam is very scarce in *France*; those who want it, procure it from *England*, where it is very common. Chuse that which is fresh, of a sweet penetrating Smell, like Balm of *Gilead*; when it grows stale it becomes of the Consistence of the dry Balsam of *Peru*: This has the Virtues of the other Balsams, but more particularly is proper for internal Uses, not being in the least apt to vomit.

Balsam de Tolu is a balsamick resinous *Lemery*. Liquor, of a reddish Colour, inclining to that of Gold; being of the Consistence of Turpentine, very clammy, and sticking fast to any thing; when it grows old it grows dry and solid, and will break into Pieces almost like Aloes. It is of a very fragrant and pleasant Smell, reviving the Senses, much resembling the Smell of Lemons and Jessamine Flowers, but stronger, and not so faint and weak. It is more esteem'd than the Balsam of *Peru*, and reckon'd almost as good as the Balm of *Gilead*. It attenuates, dissolves, is pectoral and vulnerary. Outwardly it cures old Aches and Pains in the Head and Joints. It stops Catarrhs, helps Defluxions, strengthens the Weakness of the Bowels, dissolves Tumours, and cures Contractions. It is used in the Tincture, Spirit, and volatile Oil, as the Balm of *Gilead*, &c.

[The Tree which produces the Balsam of *Tolu*, is the *Balsamum Provincæ Tolu*, *Balsamifera quar-ta*, Hern. 53. *Arbor Balsamifera Tolutana*, Jons. D. 308. *Balsamum Tolutanum foliis ceratiæ similibus, quod candidum*, Com. 626. The Balsam is brought in Shells from the Province of *Tolu* in *America*.]

53. Of the New Balsam.

Pomat. THE *New Balsam*, in Colour and Shape, is very like that of *Tolu*, but of a much less agreeable Smell. This Balsam is made after the same manner as the Oil of Bays, from little red Fruit that comes in Clusters, upon a kind of Tree, the Leaves whereof are very large and broad, green above, and greenish underneath, that grows in the *West-Indies*, especially in the Island of *St. Domingo*. This Balsam is so very scarce in *France*, that there is very rarely any of it to be seen.

[What was once called the *New Balsam* was the *Balsamum Ipecuebæ*, drawn from the Fruit of the *Becuiba nux*, Geoff. 324. It was of great Esteem in *Brazil* for Palsies and Rheumatisms, and brought over to *England* as a great Remedy in such Cases, but it never came into Use here.]

54. Of Liquid Amber.

Liquid Amber is a Liquid Rosin, clear and reddish, which flows from the *Pomat.* Trunk of very thick and large Trees; the Leaves whereof are like those of Ivy, and which grow plentifully in *New Spain*, where they are called *Oçocol*. The *Indians* cut the Bark of these Trees, which is large, and very thick, and so they afford a Resin, which, when they have got a reasonable Quantity of, they send into *Spain*, where it is sold by Barrel, as they do fine Turpentine: It was once very common in *France*, though at present it is scarce. Chuse that which is clear, of a good Smell, inclining to that of Ambergrease, which gives it the Denomination, and of a pale Yellow. When it grows old it thickens, and is of a redder Colour. It is an exquisite Balsam for curing of Wounds, especially the *Fistula in Ano*.

We sell two Sorts of *Liquid Amber*; the one in a thin clear Oil, which, for its Consistence, is call'd, Oil of *Liquid Amber*; and the other in an Oil of the Consistence of Turpentine, which from thence is call'd, *Balsam of Liquid Amber*: But the Difference is no other than according to the Time the one or the other falls from the Tree; for that which falls first is always the clearest, and so ought to be preferr'd to the other. As *Liquid Amber* is scarce, they make Use of Oil of *St. John's Wort* in its Place, which is made with the Flowers put in Oil Olive, and set it in the Sun during the Dog-Days. These Flowers give a fine beautiful red Colour to the Oil. Some People add, very properly, fine Turpentine and Saffron. The older this Oil is made, the more Virtue it has in it. Besides this, they make another Oil of a blue Colour, with Camomile Flowers, after the same manner as the former.

Liquid Amber is a natural Balsam, or a Liquid Rosin, as that of Turpentine, clear, reddish, or yellowish, of a pleasant Smell, almost like Ambergrease. It flows by Incision from the Bark of a fine large Tree, that grows in *New Spain*, which the *Indians* call *Oçocol*, or *Ofocol*; the Leaves resemble those of Ivy; the Bark is thick, of an Ash-Colour, and very odoriferous. They gather this Liquid Rosin, and bring it to us in Barrels; but sometimes they leave it to dry in the Sun, where it hardens like common Rosin. This Consistence makes it easier to transport than the other; but the Smell is not fragrant, because the Heat of the Sun exhales some of the more volatile Parts. The Trees which produce the *Liquid Amber*, perfume with their fine Smell the Places where they grow. This *Liquid Amber* is an excellent Balsam, it mollifies and consolidates, is good against Hardness of the Womb,

Womb, Rheumatism, Sciatica, and Weakness of the Nerves.

[The Tree which produces the *Liquid Amber* is the *Styrax Aceris folio*, Rai. Hist. 2. 1848. *Styracem fundens vel Styrax arbor Virginiana Aceris folio*, Breyn. Prodr. 2. 84. *Acer Virginianum odoratum*, Herm. Cat. K. B. 641. It is common in *Virginia*, *New Spain*, and other Parts of the *West-Indies*, and is kept in the Gardens of the Curious here in *England*.

The resinous Juice flows either naturally, or by Incisions, in great Abundance ; but there is also another Balsam procur'd from this Tree, by boiling the Twigs and Leaves, and taking off the oily Matter which swims at the Top. This is often sold for the true Balm of *Gilead*.

Some have imagin'd this to be Liquid Storax of the Shops ; but that is an erroneous Opinion.

The resinous Juice was once much used in Perfumes, &c. but is now very seldom seen.]

55. Of Turpentine.

Pomat. **T**urpentine is a viscous, oily, transparent, resinous Liquor, that flows naturally, and from the Incisions that are made in the Trunks of several different Trees, as we shall see afterwards. We usually sell three Sorts of Turpentine ; to wit, the Turpentine of *Chio*, the Pine Turpentine, commonly called *Venice Turpentine*, and the *Bourdeaux Turpentine*. There are several others besides these to be met with in the Shops, which are nothing else but Names given them, according to their Adulterations.

The first and the dearest of all the Turpentine is that of *Chio*, which flows from the Trunk and large Branches of a Tree of a moderate Size, called the *Turpentine Tree*, which grows in the Isle of *Chio*, in *Cyprus*, *Spain*, and *France*. These Trees bear deep green Leaves, with Flowers and Fruit, as expressed in the Figure.

As for the Turpentine of *Chio*, it ought to be of a solid Consistence, without any kind of Taste or Smell, of a White, inclining to a Green, and the least Subject to stick in the Teeth, or to the Fingers, that is possible ; and take Care of the Pine Turpentine, which some sell, when boiled to a Consistence, for the true *Chio Turpentine* ; but this Cheat is easily found out by its strong Smell, and because it sticks to the Teeth. This Turpentine is very little used because of its Dearness ; but there are some curious honest Apothecaries who make Use of it upon most Occasions.

The second Turpentine is what we falsely call *Venice Turpentine* ; this flows at first without Incision, from the Larch Trees, Pines and Fir Trees during the great Heats ; and this Turpentine, or rather natural Balsam, which flows without Inci-

sion, is call'd by the *Lionnoise*, *Bijon* ; but the little we have brought us is not worth speaking of, for the Merchants of that Country know how to dispose of it to better Advantage, in that they sell it for true white Balsam of *Peru* ; which is quite contrary to what M. de Furetier observes, who says, that the *Bijon* is a Drug the Apothecaries substitute in the room of Turpentine, which is a great Error for many Reasons : First, because a Pound of *Bijon* is worth more than six Pounds of Turpentine. Secondly, because there are very few Apothecaries or Druggists in *Paris* that know what it is. And in the last Place, I believe, if we wanted ten Pounds of *Bijon* in *Paris*, we shou'd be at a great deal of Trouble to get it, whereas we might meet with many thousand Pounds Weight of Turpentine.

To return to what is call'd *Venice Turpentine* : When the poor People, who wait in the Fir-Woods, see that the Trees will drop no more of their own accord, that is, will yield them no more of the *Bijon*, they make Incisions in them, from whence flows a clear Liquor like Water, of a yellowish white, and that, as it grows older, thickens, and becomes of a Citron Colour. When they make their Turpentine Harvest, which happens twice a Year, to wit, in Spring-time and Autumn, they bring it to *Lyons* in Casks, or in Goat-Skins, to sell to the Merchants, of whom we buy it ; hence we may be satisfied, that what is improperly call'd *Venice Turpentine*, is the fine Larch Tree, Pine or Fir Turpentine of *Lyons*. Chuse that which is clear, and the whitest that can be got, and beware of what is adulterated with Resin and Oil of Turpentine, which may be easily known by its Colour, Smell and Consistence, and by wetting a Piece of Paper therein, and burning it : If there be any Addition of the said Oil, it will yield a black stinking Flame ; on the contrary, if it is natural, it affords a resinous Smell, and will not burn away so quick. This Turpentine serves for many Uses, as well in Physick as for the Artificers, especially for making Varnish.

The third is the common Turpentine, to which some give the Name of *Bayonne*, or *Bourdeaux Turpentine* ; this is white, and thick as Honey, and comes most from *Bourdeaux*, *Nantz*, or *Rouen*. This Turpentine flows not from the Trunks of Pines or Fir-Trees, as most People believe ; but is made from a white hard Resin, which we call Incense, and the Mountaineers Barras. As to the true *Venice*, *Cyprus*, or *Pisa Turpentine*, we have none brought us ; what we sell by the Name of *Venice Turpentine* is, as I have said before, the Larch and Pine Turpentine of *Lyons* ; for the *Cyprus* they substitute that of *Chio* ; for the *Pisa*, the common Turpentine, mix'd with the Oil of Turpentine and a little Verdegrease, to give it a greenish Cast, which is very improper for

for many Reasons. The true *Pisa Turpentine* is of a yellowish White.

There are great Cheats in the Mixtures sold under the Names of the different *Turpentine*s, which it were well if there cou'd be some Way found to remedy, that sick People and Workmen, as well as Apothecaries and Surgeons, might not be imposed upon with artificial *Turpentine*s for the natural. As for the *Straßbourg Turpentine*, it rarely comes amongst us, but is frequently sold in *Holland* and *England*.

56. Of Common Incense, Rosin of the Pine-Tree, or Barras, and the different Preparations of it, Pitch, Rosin, &c.

Pomet. WE sell two Sorts of *Pine Rosin*, or *Incense*, one under the Name of *Galipot*, or common *White Incense*, and the other under that of *Marbled Incense*; these differ not but in Colour. The first, which is white, is a Rosin that flows by Incisions, that are made in the Pines, from whence it takes the Name of the *Gum*, or *Rosin* of the *Pine-Tree*; and when it flows in a fine Season it is neat and white; but when it takes a Part of the Bark, or other Foulness into it as it runs down, it is marbled or speckled; and when it is so, and good withal, the Hawkers sell it for Benjamin, though it is very different from it, in that the Benjamin is of a good Smell, and the *Spotted Incense* is extremely strong smelling; this is of no other Use, that I know of, but to sell instead of Benjamin, which in all Things, but Smell and Virtues, it very nearly resembles.

This *Pine-Rosin*, or *Common Incense*, is the Basis of many Things, as we shall see in Order. It ought to be chosen dry, clean, and as white as may be. They dissolve the *White Incense*, and put it into Barrels, or Half Barrels, which contain from three hundred and fifty, to seven hundred Weight, and send it us under the Name of the gross or common Turpentine, which ought to be clear, and as little Mixture in it as may be. As this Turpentine is a Rosin which is at Times more or less clear and thin, there are Barrels of this Commodity to be met with, where there are sometimes fifty Pounds of Turpentine as clear as Water, that swims at Top, which is frequently sold for *Venice-Turpentine*, but may be known by its Colour.

The common Turpentine is much in Use to make Ink for the Printers, as also for the Farriers, and to make coarse Varnish, which they do by melting common Turpentine with Oil of Turpentine; but this is a Composition they are forced to make in Places far from other Buildings, for Fear of Fire. They distil Turpentine in great

Alembicks, and there flows a Water first, then a white Oil, then a red Oil, which is a true natural Balsam for the Cure of Wounds. But as these white and red Oils are not much used, we do not deal in them; but instead thereof we have a very considerable Trade in the Oil drawn by the Alembick from the *Resin* or *Incense*, as it flows from the Tree. This Oil is made plentifully in the Forest of *Cuges*, about four Leagues from *Marseilles*, and in the Neighbourhood of *Bourdeaux*. This Oil is what we call *Ætherial Oil*, Spirit, or Essence of Turpentine; that which remains in the Alembick, is what we call *Colophony*, or Black Resin.

Oil of Turpentine, to be fit for Sale, and serviceable upon all Occasions, shou'd be clear and white as Water, of a strong penetrating Smell; yet this is a mischievous Commodity, and great Cheats are put on People in it, besides the Risque of Fire, and the little Profit there is got by it, which is the Reason why so many People will not deal in it. This Oil is useful for several Sorts of People; as Painters, Farriers, and others. It is likewise a true natural Balsam, and very proper for all Sorts of fresh Wounds. Several Persons have assur'd me, that the Oil of Turpentine which comes from *Marseilles* is made with aromatick Herbs, as Thyme, Rosemary, Lavender, and the like; and call'd Herb-Oil; but I cou'd never have this confirm'd to me by several Letters that I have receiv'd from *Marseilles*; but on the contrary, every one assur'd me that it was made with *Pine Resin*, or *White Incense* only.

They dissolve this *Resin* with a little Oil of Turpentine and some common Turpentine, and make what we call Burgundy Pitch; they pretend that the best is made at *St. Nicolas* in *Lorraine*, which is quite contrary to the Truth at this Day; for the best of this Kind comes from *Holland* or *Straßbourg*. It is observable, that this Commodity comes not but in private, or by stealth, being contraband. I believe that the Sort of white Pitch which we make in *France*, has more Smell, and is of a less Body, and whiter than that of *Straßbourg*, because we put in more Oil and Turpentine, and the *Dutch* use nothing but the Resin. The Difference may also, in some Degree, proceed from the different Climates. *Burgundy Pitch* shou'd be chosen clean, dry, and firm. The Use of this Pitch is for several Sorts of Work, and it is of some account in Physick, because it is attractive; but it is a very troublesome Plaister, sticking close to the Skin, but may be taken off with warm Oil, or Beer and Butter.

They make, besides this, with the *Pine Resin*, or *Common Incense*, boil'd to a Consistence, what we call common yellow Rosin; but that which we sell is gather'd at the Roots of the Trees; and





Turpentine Tree



Fir Tree



Pine Tree

Book 9.



Scammony

and such as is dirty, after having melted it, is thrown into Vessels, to form it into large Cakes of an hundred Weight and upwards, such as we see it in. The fine Rosin comes from *Bayonne* and *Bordeaux*, which ought to be dry, fair, the least full of Sand that can be; this is much used in Ointments, Plaisters, &c. They also make of this *Resin* or *Incense*, what we call in *France* *Dry Pitch*, by boiling it 'till it is almost burnt; but the most of this which we have is the Remainder found in the Alembicks after the Oil of Turpentine is distill'd: It ought to be clear and dark colour'd.

This, which we commonly, but improperly, call *Colophony*, is also of some Use in Physick, but more abundantly for several Sorts of Works: they throw this, while hot, into a sufficient Quantity of Tar, in order to give it a black Colour, and then it becomes what we call *Black Pitch*, of which we have two Sorts, which differ only according as they are hard or soft. The best *Black Pitch*, as well as *Tar*, is what we have from *Norway* and *Sweden*, but especially from *Stockholm*. We sometimes make *Black Pitch* in *France*, but it is nothing so fine as that of *Stockholm*. The Uses and Virtues of this are so well known, it wou'd be very trifling to insist upon them. There is drawn from *Black Pitch*, by Means of a Retort, a reddish Oil, which for its Excellence is call'd Balm, or Oil of *Pitch*. This is a very good Balm, and is pretended to be equal to the natural Balsams.

They melt *Black Pitch*, and afterwards dip a Wick of Flax, Hemp, or the like in it, which they sell by the Name of Links.

There is another *Black Pitch*, which the Antients call *Zopiffa*, and which is properly what the Mariners use to pitch their Vessels with. This *Zopiffa* is a Composition of *Black Pitch*, Rosin, Suet and Tar melted together; and this is, as some say, the true *Pix Navalis*, which the Apothecaries ought to use, but few of them give themselves the Trouble to enquire after it, the common *Black Pitch* always supplying its Place.

57. Of Tar, or Liquid Pitch.

Pomet. THIS is a clear fat Liquor that flows from the Trunks of old Pines.

When they wou'd kill or destroy the Tree, the *Swedes* and *Norwegians* cut the Bark round the Tree, which, instead of yielding a white Incense or Resin, yields a black Liquor, which is the *Tar*; and presently, as soon as all that is fallen, the Trees die, and are good for nothing but to burn.

This may help to undeceive several who believe, as many Authors have vouch'd, that *Tar* is made by burning of the Pines; for it is certain

that all the *Tar* we now sell is made as already mention'd, and not by Means of the Pines that are burnt. That which is found clear, is improperly call'd Oil of Pitch, and sold under the Name of common or false Cade Oil. The *Tar* is much used by the Mariners, Farriers, and Shepherds, to mark their Sheep, as well as to defend them from Diseases. Chuse such as is natural and clean, not such as is made with Oil and Pitch, but the true *Stockholm Tar*.

It is generally brought to us from *Denmark*, *Norway*, *Finland* and *Swedeland*; but there is much of it made in *New-England*, *Virginia*, *Carolina*, and other Parts of *Florida*. It is the Produce of all resinous Trees. It was first taken from the Cedar, the Larch-Tree, Fir-Tree, and Pitch-Trees; but now chiefly from the Pine-Trees. It cures all Sorts of Scabs, Itch, Tetter, Ringworms, and other Vices of the Skin. *Tar* is better than Pitch, because in boiling the Pitch loses the more subtil and fiery Parts; this therefore is proper for Coughs, Phthysicks, Hoarseness, and other Humours that fall upon the Lungs. *Tar* and Bees-Wax make a Plaister that is discutient and anodyne, good against the Gout, and all Manner of old Aches and Pains. The Spirit is very diuretick, opens all Obstructions, and resists the Scurvy.

[What we call Lamp-Black is made by burning the foul Parcels of Pitch, Resin, &c. and gathering the light Soot that they send up; this is much used by Artificers of various Kinds.]

58. Of Colophony, or Rosin of Turpentine.

THE true *Colophony* is made of fine *Turpentine* boil'd in Water 'till it *Pomet*. comes of the solid Consistence of *Rosin*, by which Means it is made portable. They ought to be undeceiv'd who believe it to be the dry brown *Pitch*, since the true *Colophony* is the *Turpentine* of the Pine-Wood, made hard by boiling. One may know when this *Turpentine* is boil'd enough, by taking it out of the Water, and seeing that it hardens and is brittle; this is what the Apothecaries call boil'd *Turpentine*; they heat and make it into Pills, with Liquorish Powder, for Venereal Disorders.

It is call'd *Colophony*, as said by some, from a Town in *Ionia*, call'd by that Name, from whence it first came. It is clear, yellow, or black, and when dry, brittle; and therefore will easily beat to Powder. Chuse that which is clear and sweet, and which being burnt smells like Frankincense. Some is made in *England* from *Turpentine* distill'd; for after the Oil of *Turpentine* is drawn off, the *Colophony* or *Rosin* re-

mains at Bottom; the less Oil you draw off, the whiter you have your Rosin; the more Oil, the blacker is the remaining *Colephony*.

It is emollient, glutinative and healing, given inwardly it strengthens a weak Body, eases Pain, helps Ulcers in the Reins, Bladder, or Neck thereof; gives Relief in the Gout, fills Ulcers with Flesh, and skins a Sore. Given inwardly in Powder, from one Dram to two Drams, it cures the running of the Reins in Men, and the Whites in Women, and takes away the Weakness and ill Temperament of the Womb.

59. Of Varnish.

Pomet. WE sell six Sorts of *Varnish*; to wit; the first, the *Drying Varnish*, which is made of Oil of Spike, fine Turpentine, and Sandarac melted together. The second is *White Varnish*, call'd *Venetian Varnish*, which is Oil of Turpentine, fine Turpentine and Mastick melted together. The third is *Spirit Varnish*, which is composed of Sandarac, White Karabe, Gum Elemi and Mastick, with Spirit of Wine. The fourth is *Golden Varnish*, which is made of Linseed Oil, Sandarac, Aloes, Gamboge, and Litharge of Gold. The fifth is *China Varnish*, which is made of Gum Lac, Colophony, Mastick in Tears, and Spirit of Wine. The sixth is *Common Varnish*, which is nothing else but common Turpentine dissolv'd in Oil of Turpentine, as observ'd, speaking of Turpentine, before. There is another *Varnish*, which some of the Religious make; but as we do not deal in it, I shall not trouble myself or the Reader about it. As to the Manner of making, and Quantity of each of the Ingredients, every one does it as he likes; but in the making it People must be very careful of its taking Fire; and another Caution is, that the Ingredients be all good in their Kinds, for there is no being too nice in the making it.

Terebinthina or Turpentine, is a *Lemery.* liquid Rosin, or a viscous, gluey, resinous, oily, clear transparent Liquor, having the Consistence and Quality of natural Balsams, which they draw by Incision, or without Incision, from several Sorts of Trees that grow in the hot Countries, as Pine, Fir, &c. We use two Sorts of Turpentine in Physick; the first is call'd *Chio Turpentine*, because it is produced in the Isle of *Chio*: This is the most esteem'd and dearest; but it is scarce. It flows by the Incisions made on the Trunk and large Branches of the Turpentine Tree. Its Consistence is thick and pretty hard. Chuse the cleanest, most transparent, and of a whitish green Colour, having little Smell, and being almost of an insipid Taste.

The second Sort is call'd clear Turpentine; it is abundantly more liquid or thin, finer or more fragrant than the former: It flows without cutting, and likewise with cutting, from the same Sort of Trees, but is brought us from *Dauphiny*; &c. That which flows without Incision, is by the Peasants of the Country call'd *Bijon*: It is a Sort of Balsam that is of a Consistence, Colour and Virtue, almost like that of White Balsam of *Peru*. The Turpentine that flows by cutting, is that usually call'd *Venice Turpentine*, which, tho' none of it comes from thence, but from other Parts of the Country, is the most commonly used in Medicine, being close, neat, clear, fine, white and transparent, of the Consistence of a thick Syrup, of a strong and unpleasant Smell, and the Taste something bitter. All the Turpentine yield a great deal of Oil, volatile, acid, or essential Salt. They are very aperitive, proper for the Stone and for Cholicks, Ulcers of the Kidney and Bladder, Retention of Urine and Gonorrhœa. Dose from half a Dram to a Dram. It gives the Urine a Violet Smell, and creates, sometimes, Pain in the Head.

The true Turpentine is nam'd *Terebinthina*; because it flows from a Tree call'd *Terebinthus*: That which flows from other Kinds of Trees is call'd by the same Name, from their Resemblance. The Turpentine Tree is the *Terebinthus*, vel *Terebinthus vulgaris*, the common Turpentine Tree, *Terebinthus angustiore folio vulgatio*, or the more common Turpentine Tree with the narrow Leaf, is a Tree of a middle Size, as to its Height, cover'd with an Ash-colour'd Bark: The Leaves are oblong, firm, always green, like the Bay, but much smaller, rang'd severall on a Side, which end in a single Leaf; the Flowers are disposed in purple Clusters, full of Stamina or Threads, that are charg'd on their Tops with Apis. The Flowers leave no Sort of Fruit after them, the Fruit rising upon Stalks that bear no Flowers; they are thick Shells, like Juniper Berries, pretty hard, viscous, or resinous to the Touch: of a greenish blue Colour, tinging the Hands, each of them inclosing an oblong Seed; this Tree is very resinous, and the Wood hard, like that of Lentisk. It bears often also, like the Elm, a Bladder or Bag, fill'd with a fat Liquor, where Flies engender. It grows in the Isle of *Chio*, *Cyprus*, *Spain*, *Languedoc*, *Dauphiny*, and other warm Countries; and when it is pretty full of Turpentine, and no Incisions are made, the Rosin of the Turpentine grows thick, hardens, and produces Obstructions that stop the Course of the Circulation of the nutritious Juice; then the Tree falls into a Kind of Suffocation, for it swells and bursts. To prevent this Accident, they make Incisions or Slashes, at the Bottom of the Trunk of the Tree, which is like bleeding in the Foot; by which they make the Turpentine flow, which

which before caused so great a Repletion. They likewise cut the Trunk and other large Branches of the Tree, which has the same Effect as bleeding in the Arm; and under these they place Earthen, or other Vessels, to receive the Turpentine that flows. This Tree affords a great deal of Oil and essential Salt. The Bark, Leaves and Fruit are astringent, and proper to stop the Gaping of the Guts, and to provoke Urine, &c.

[There are four different Turpentine in the Shops, produced by four different Trees; the true and exact Account of which is, That the first of them, the *Chio Turpentine*, is produced by the *Terebinthus vulgaris*. C. B. Pin. 400. *Terebinthus*. J. B. 1. 387. Rai. Hist. 2. 1577, &c. which grows common in the Islands of *Chios*, *Cyprus*, and some other Places.

The second, the *Venice Turpentine*, is produced by the *Larix folio deciduo conifera*. J. B. 1. 265. *Larix*. R. Hist. 2. 1405.

The third, the *Strasbourg Turpentine*, is produced by the *Abies Taxi foliis*. Rai. Hist. 2.

1394.. *Abies Taxi folio fructu suesum spectante*. Tourn. Inst. 585.

And the fourth, the common Turpentine, is made from the Resin of the *Pinus Sylvestris*. Ger. 1175. *Pinus Sylvestris vulgaris Genevensis & Tæda*. J. B. 1. 253.

The Rosins and Pitch of different Kinds, and Tar, are made from the Resin of the *Picea major prima sive Abies rubra*. C. B. Pin. 493. *Picea Latinorum sive Abies mas Theophrasti*. J. B. 1. 238. The Common Resin by boiling it in Water to a due Hardness; the Tar, by burning the Wood of the Tree in a Furnace; the Common Pitch by boiling Tar in proper Vessels to a Consistence; the Dry Pitch by boiling the same Mass higher still; and the *Burgundy Pitch* by the same Preparation as the Common Resin, only, instead of letting it boil to that Hardness and Consistence, it is taken out of the Water as soon as it begins to boil. All these Preparations may also be made from other Species of the Fir, Pine, and Cedar; but the most and best are from this Species.]

The End of the Book of G U M S.

BOOK the Ninth.

OF JUICES.

P R E F A C E.

THE Word Juice signifies a liquid Substance, which makes up a Part of the Composition of Plants, and which communicates itself to all the other Parts, to serve for their Nutrition and Growth; this Juice is to Plants what the Blood is to Animals. The Word Juice is also understood to express a thick Liquor which is drawn from Vegetables, or the Parts of them, and, by the Means of the Sun, or Fire, reduced into the Consistence of a liquid Eleüuary, or solid Extraët, in such a Condition as to preserve or keep for a considerable Time. I don't pretend to speak of the liquid Juices, but only of such as are thus prepared, and which we trade in. I shall begin with Scammony, as being the dearest Juice, and most used of any we have, and in which are committed the greatest Abuses.

1. Of Scammony.

Pomet. SCAMMONY is a thicken'd Juice of the Root of a Plant that creeps along Trees and Walls, whose Leaves are green, and

made in Form of a Heart; after which come white Flowers, shap'd like Bells. This Figure of the Flower is the Reason why some write that the Scammony Plant is a Kind of *Volubilis*, or *Bindweed*; but however that be, the Scammony we now sell is the Juice thicken'd by Assistance

of the Fire, drawn by Expression from the Root of the said Plant, that grows plentifully in several Parts of the *Levant*, but especially about *Aleppo* and *St. John d'Acre*, from whence the best *Scammony* is brought us, which, when right, ought to be true *Aleppo*, light, grey, tender, brittle, resinous, and when crumbled between the Fingers will appear greyish, with a bitter Taste and a faint unpleasant Smell; reject such as is heavy, hard and blackish.

As to those who purchase great Quantities of *Aleppo Scammony*, let them take care that it be the same within as without; for I can assure them I have seen in *Scammony*, Pieces of Wood, Coal, &c. put into the Middle, so that there has not been above the Thickness of one's Thumb of fine *Scammony*. I make no doubt but the *Levantine* roll up in the *Scammony* they make, Charcoal, Stones, and other foreign Bodies which we meet with in it, either by Chance or designedly, and afterwards cover it with a Paste of fine *Scammony*, after the same Manner as the Sealing-Wax-Makers do their bad Wax, as mention'd in the Chapter of *Gum Lac*.

It is easy to judge by this Description, that *Scammony* is not made by the Heat of the Sun, as several believe: Besides, a Friend of mine, a Surgeon at *Marseilles*, who dwelt a long Time at *Aleppo*, confirm'd me in what I have here related. They make from the *Aleppo Scammony*, by the Help of Spirit of Wine, according to Mr. *Lemery's* Prescription, a Rosin of *Scammony*, which has more Virtue than the *Scammony* itself; but as this is dear, and there is but little Consumption of it, I shall not trouble myself to say any thing more of it. *Scammony* is, with good Reason, call'd one of the Pillars of Physick; for it is one of the most famous Catharticks, or Purgers, in the World, admitting of various Preparations: As, 1st, *Diagrydium*, or *Scammony* prepar'd and corrected with the Juice of Quinces. 2^{dly}, *Scammony* sulphurated. 3^{dly}, *Scammony* vitriolated. 4^{thly}, Extract of *Diagrydium*. 5^{thly}, Extract of *Scammony*. And, 6^{thly}, Syrup of *Scammony*, which is made with Sugar and Spirit of Wine over a Fire. Besides which, we have the *Cornachine Powder*, made of *Scammony*, Cream of Tartar, and Antimony diaphoretick. All the Preparations of *Scammony* are prevalent against old contumacious Diseases, such as Gout, Scurvy, Dropsy, Rheumatism, Obstructions, Head-achs, Apoplexies, Relicks of the Venereal Disease, &c. *Scammony* is not proper to give in Fevers, or to old and weak Persons, Children, or breeding Women, being sharp and biting, and apt to inflame, by reason of its acrid Quality. This following gentle Preparation of *Scammony* may be given almost in any Case, or to any Constitution, being a Marinalade of *Scammony*. Take *Scam-*

mony and Turbith, of each four Ounces, make an Extract with Spirit of Wine, add this to six Pounds of Marinalade of Quince, which hath not above one Pound and a half of Sugar in it.

2. Of Smyrna Scammony.

BESIDES the *Aleppo Scammony*, we sell, tho' very improperly, a black, *Poact.* heavy, softish *Scammony*, that is full of Stones, Shells, and other strange Bodies, in a Word, the very Reverse of *Aleppo Scammony*; for which Reason it ought not to be meddled with, any more than the grey, light, brittle Sort, that is nothing else but a Composition of Rosin mix'd with some violent Purgatives, in order to promote the Sale of it. I think myself oblig'd, in order to set the Publick right in this Matter, to let them know that the great Cheats committed this Way, in sophisticating of Medicines or Drugs, are not done by the Generality of Merchants, or the wholesale Dealers, but the little retail Traders, who impose their pernicious Commodities upon honest well-meaning People, without Honour or Conscience. And to shew the Malignity of some of these ill Drugs, I shall here give you the Certificate of M. *La Tour*, Physician of the Faculty of *Montpellier*, upon the Subject of *Scammony*.

“It happen'd, as I was preparing half an
“Ounce of a Drugg that was sold to me for
“*Scammony*, that after the Preparation was done
“the Syrup turn'd of a green Colour, like the
“Juice of Herbs, which made me think the
“Drug was naught: Experience confirm'd me
“in this Opinion; for having given some to a
“little Dog, his Body swell'd up, and he re-
“main'd sick five or six Days, without ever
“purging at all.

Sign'd 16 Sept. 1693.
De la Tour, Physician at *Montpellier*.

Scammonium vel Scammonia, or *Scammony*, is a concrete resinous Juice, or *Lemery*. a greyish brown Gum, that flows by Incision from the Root of the great exotick Bindweed, call'd *Convolvulus Syriacus*, and *Scammonia Syriaca*, according to *Morison* and *Tournefort*, the Syrian Bindweed. This Plant bears several long Stalks, winding, creeping, and clinging to and about the adjacent Shrubs. The Leaves are large, pointed and triangular, in the Shape of a Heart, smooth, of a fine Green, hanging upon short Stalks. The Flowers grow in the Wings of the Leaves, in Form of Bells, of a purple or a whitish Colour, fair and pleasant to the Eye. When they are gone, a Fruit that is almost round and membranous succeeds them, containing in its Cavities black corner'd Seeds. The Root is long and

and thick as one's Arm, of a greenish brown without and white within, supply'd with Fibres, full of a white milky Juice, as all the Plant is, and of a strong Smell. It grows plentifully in several Parts of the *Levant*, but especially about *Aleppo*, in fat Land. When the Juice is taken from the Root, they thicken or inspissate it by the Heat of the Fire, to give it a solid Consistence.

The best is clear, like Gum or Rosin, thin, quickly dissolving, friable, not very heavy, of a greyish black, turning white or milky by the Touch of the Tongue, and not much inflaming it. The thick, heavy and very black, is either the Juice of the whole Plant, or adulterated; if the latter, it is commonly done with the Juice of Tithymal, which you may easily know by its Heat, and its Mixture with other droffy Substances. It is strongly purgative, evacuates bilious, acrid, ferous, or melancholy Humours. The Dose from four Grains to sixteen.

[The Plant which produces the *Scammony* is the *Convolvulus Syriacus* & *Scammonia Syriaca*. Hist. Ox. 2. 12. *Scammonia Syriaca legitima*. Park. 163. The *Aleppo Scammony* is much preferable to the *Smyrna*; but at best it is alone a very uncertain Purge, sometimes not operating at all, and sometimes causing fatal Hypereatharises; and what is very remarkable is, that it often does not operate at all the first Day, but brings on afterwards an unsupportable Hypereatharisis and Tenefmus.

The *Pulvis Cornachini* is an admirable Preparation of it and has all its Virtues, which are very great, without any of its Danger.]

3. Of Opium.

OPIUM, which the *Turks* call *Amphiam*, and the Antients *Meconium*, is a Liquor white as Milk, that flows from the Head of black Poppies, by the Help of Incisions made therein. This Liquor being dropp'd from the Plant, grows thick, and changes its white Colour into brown; and this is the true *Opium*, which is in such Use among the *Turks* that they subsist by it sometimes for two Days, without taking any other Nourishment. And when they go to fight they take it to excess, that it may animate them, or at least make them out of their Senses, and so insensible of Danger.

It is a partly resinous and partly gummy Substance, blackish and soft while new, but hardening with Age; got by Incision from the Heads of white seeded Poppy, and form'd into a Mass; of a subacrid bitter Taste and strong unpleasant narcotick Smell.

The Liquor, as it flows from the Incisions, is white, but blackens in drying. There are two Kinds of it, the *Thebian* and *Indian*; but they

are both produced by the same Species of Poppy, and only differ according to the Difference of the Places where they grow.

The *Indians* prefer the *Bengal Opium* to the *Theban*; but we always account the *Theban* better than the *Indian*.

The true *Opium* is in small Tears, like *Mastic*, but of a darker Colour.

There is another Sort of *Opium* that flows from the Head of the black Poppies, without any Incision, and which, in falling, coagulates and grows brown by the Heat of the Sun; and it is this concreted Juice which properly ought to be call'd *Opium*; for the Word *Opium* is derived from the Greek Word *Opon*, or *Opon*, which signifies Juice.

There is also a third Sort got by Incision from the Heads of the white Poppies. This Juice thickening, as that of the Black, is call'd by the *Turks* *Measlack*. But as these three Sorts of *Opium* do never reach us, I shall proceed no further with them, but only describe that which is brought us. That which we call and sell for *Opium* is a blackish Mass, which the *Turks* and the People of the *Levant* send us, and is a Juice made by Expression from the Heads and Leaves of Poppies, reduced to the Consistence of an Extract by the Help of Fire, and then form'd into Cakes of different Sizes; and, to render it carriageable, is wrapp'd up in Leaves, as we have it now brought to us.

There is another *Opium*, which the *Turks* make from the Juice of a Plant they call *Glau-cium*, which is like our horned Poppy; this they mix with the Juice of Poppies, and make a Mass together. It is so true, that the *Opium* we now sell is no other than the Juice by Expression, and not the Juice which flows naturally from the Poppy Heads, that the very Price they often sell it at, is alone a sufficient Proof of it.

With all the Diligence I have been capable to make use of, I have not found it possible to meet with white *Opium*, notwithstanding what some modern Authors have affirm'd; and I cannot believe, indeed, that they have ever seen any: It is probable that the *Opium* flows from the Heads of Poppies white like Milk, but it must change its Colour by being exposed to the Air as it hardens; therefore I think myself oblig'd to detect the Errors of these People, and let the Publick know the Truth of Things, and that such Authors only write from the Relations of other Men.

As to the black, hard, yellow, or soft *Opium*, it is no Novelty to meet with any of them, because there is scarce a Cask or Barrel of *Opium* where there is not black, and yellow, and hard, and soft to be met withal; for every Body knows that the thicker and older any Juice is, the more it will blacken. If it is yellow, it is owing to its be-
ing

ing over-boil'd and dry'd. And as to what they say, that the White comes from *Grand Cairo*, and that the *Turks* keep it for themselves, I have enquir'd of People that have liv'd a long Time there; but they all have affirm'd, that the *Opium* they saw at *Grand Cairo*, and which the *Turks* use, is brown.

The Opinion of M. *Furetiere* ought to be rejected, when he says that *Opium* is made by beating the Juice in a Mortar; and when it is thick-en'd forming it into Troches. Raw or crude *Opium* is not much used in Physick; but the Extract, which is made by Water or Spirit of Wine, as directed by Mess. *Charas* and *Lemery*, which is what the Apothecaries call *Laudanum*. There is another call'd *Laudanum Opiatum*, which is a Composition of *Laudanum*, Extract of Saffron, Magistery of Pearl and Coral, Oil of Cloves, Karabe, Musk and Ambergrease; the Whole being compos'd into an Electuary; but as this is made in the Apothecaries Shops the Druggist has no Trade with it. Some make an Extract about *Paris*, and other Places, from black and white Poppy Heads, which they call simple *Diacodium*, to distinguish it from the Compound. Besides which, there is a Syrup of *Diacodium*, which every Apothecary's Shop is furnish'd with.

There are several famous Preparations besides, as *Crollius's* Extract, that of *Opium* with *Henbane*; *Quercetan's* Extract of *Opium*; *Hartman's* *Laudanum*; *Paracelsus's* specifick Anodyne; Pills of Hound's-Tongue; Pills of *Storax*, *Philonium Romanum*; liquid *Laudanum*; that of *Paracelsus*, of *Helmont*; *Willis* and *Sydenham*; *Schroder's* *Laudanum* with *Storax*, is made as follows: Take *Opium* dry'd on a hot Plate, two Ounces; *Storax Calamita*, *Labdanum*, of each one Ounce; Oil of Cloves, thirty-two Drops; mix them in a hot Mortar, and make Pills as big as Pease, from three Grains to five. *Opium* is narcotick, hypnotick and anodyne; it composes the Hurry of the Spirits, causes Rest and Insensibility, is comfortable and refreshing in great Watchings and strong Pains; provokes Sweat powerfully; helps most Diseases of the Breast and Lungs; as Coughs, Colds, Catarrhs and Hoarseness; prevents or allays spitting of Blood, Vomiting, and all Lasks of the Bowels; is specifick in Cholick, Pleurifies, and hysterick Cafes. Dose, from half a Grain to three or four.

The true *Opium* is a gummy Tear *Lemery*. that flows from the Head of the *Egyptian* and *Grecian* Poppies; but now we sell none of the true Sort, because the *Turks* keep it from us, and will not permit the Transportation of it, but send in its Stead the *Meconium*, which is a Juice made by Expression from the Heads and Leaves of the same Poppies, and reduced by Evaporation to the Consistence of an

Extract. They make it into Cakes in different Sizes, and wrap it up in the Poppy Leaves to keep it moist: This we improperly call *Opium*; it has not the fine Virtues of the true Kind, but is answerable to it in some Degrees.

The best is heavy, compact, clean, viscous, of a blackish brown, inclining to a red Colour, bitter, and a little acrid to the Taste. The most esteem'd is that of *Thebes*, that is brought from *Aleppo* and *Smyrna* in *Turky*, wrapp'd up in Leaves; the other from *Persia* and *Surat* in the *East-Indies*, being far inferior to the *Theban* or *Turky* Sort, not having so strong a Smell, nor being any thing so clean. That which the *Turks* use they gather from the white Poppy gently cut; and they take it daily from half a Dram to a Dram, to enliven them and raise their Spirits.

Authors make three Sorts of it; as *First*, The pure, from *Cairo* or *Thebes*. *Secondly*, The black and hard from *Aden*. *Thirdly*, The yellow and softer Sort from *Cambaia* and *Decam* in the *East-Indies*. Yet we generally, at this Time, reckon but two Sorts, viz. the *Turky* or *Theban*, which is weighty, of a good Consistence, thick, and more solid than the *Indian*; of a lively, fresh, reddish Colour, almost like fresh Aloes, of a strong poppy Scent, of an acrid bitter Taste, that will burn and flame; soft, easy to cut, and be dissolved either in Water, Wine, or Spirit of Wine, and is pretty clean from Dirt, Recrements or Filth. *Secondly*, The *Indian Opium*, which is softer, yellower, lighter, not of so good a Body, and much fouler, being in every respect inferior to the former.

It is proper to allay fermenting Humours, to excite or procure Sleep, to calm or appease Pain, to stop Looseness and Vomiting, to provoke Sweat; and is good in Inflammations of the Eyes and Tooth-ach. Dose from half a Grain to two Grains. *Opium* procures Rest, by its viscous and sulphureous Particles, which being convey'd into the Channels of the Brain, by the volatile Parts, agglutinates and fixes the animal Spirits, in such a Manner, that it stops, for some Time, their Circulation from the Swiftness of their former Motion; so that during that Obstruction, or Tye upon the Spirits, Sleep ensues; for the Senses are, as it were, fetter'd, or lock'd up, by the viscous or agglutinating Property of the *Opium*.

[*Opium* is the concreted Juice of the *Papaver hortense*, *semine albo*, *sativum Dioscoridi*, *Album Plinio*. C. B. Pin. 170. R. Hist. 1. 853. *Papaver simplex Album sativum*. Park. 365. *Papaver hortense simplex semine albo*. Hist. Ox. 2. 275. The *Greeks* distinguish'd two Kinds of *Opium*, one got by wounding the Head, the other by Expression; both Kinds we have in *England*, but the first is much the best and scarcest, and is the same which the *Turks* now use. It is sold in the

Empire of the Great Mogul as commonly in the Shops as Tobacco is with us. Its Effects are always narcotick, whether used externally or given internally; given in Clysters it operates quicker than taken at the Mouth; apply'd to the Eyes and Ears it has caus'd Blindness and Deafness; and a Plaister of it on the Head has occasion'd Death. It acts by its narcotick Sulphur; for we see that all Vegetables which contain Principles of that Kind, as Saffron, &c. produce in the Body the same Effect, in some Degree, as *Opium*.

When a Person has taken too great a Quantity of *Opium*, the first Thing to be done is bleeding as far as the Strength will bear, then giving acid Liquors, as Vinegar, Lemonade, &c. as also smelling to Vinegar and Aromatics; and, if the Extremity of the Case require it, making Scarifications and throwing Vinegar and Salt upon them, and laying on Blisters as well as giving sharp Clysters.

It ought not to be given to Plethorick Persons without first bleeding them, nor at all to Women at the Time of the Menses, &c. nor ever upon a full Stomach, for it then prevents Digestion and commonly is emetick: Custom will bring People to bear great Doses of it, but at first every one must begin with very small ones.]

4. Of Aloes.

Pomet. **A**LOES is a Plant that is bigger or less, according to the Soil it meets with, which has given occasion to some People to say, that it rises in some Places as high as some of our largest Trees; which is not altogether false; for there are found in *Spain*, especially in the Mountains of *Sierra Morena*, *Aloes* Plants of an excessive Height, the Leaves whereof are so thick, hard and sharp, that some of them would saw a Man asunder. In the Middle of the Leaves rises a Stalk, according to the Figure, that bears a white Seed, extremely light, and roundish.

I shall not employ my Time to relate what a great many Authors have said concerning the *Aloes* Plant, that it flowers not of a hundred Years; and that when the Flowers blow they make a great Noise, which is altogether false, since we have seen the *Aloes* Plant blow several Times in the Royal Garden at *Paris*; and when the Flower opens it is done without any Noise, or at least so small that it is difficult to discover; and it is easy for me to prove what I advance from the *Hortus Regius Parisiensis*, Page the 8th, where, in the Article of *Aloes*, are these Words: *Floruit in Horto Regio, Anno 1663, & 1664, quod ignotum hactenus fuerat Lutetiæ, idque nullo strepitu, nulla subitanea Floris eruptione, ut perperam multi fabulantur.* It flower'd in the Royal

Garden in the Year 1663 and 1664, which was never known before in *Paris*, and that without any Noise or sudden Eruption, as several had imagin'd. But I shall only say, that abundance of People were surpriz'd that I should affirm that *Aloes* produced its Fruit in Clusters, as represented in the Cut; but what I advance answers to a Piece given me by Mr. *Tournefort*, who gather'd the same in *Spain*. He had besides, in his Hands, about half an Ell of Lace four Fingers deep, and of a reddish Colour, which is made of a Silk which they draw from the Leaves of this Plant.

This Description of *Aloes* is entirely different from that made by M. *Furetiere*, who confounds the Tree of the *Aloes* Wood with the Plant which produces the *Aloes*, as I have observ'd in the Chapter of *Aloes* Wood. At present we sell three Sorts of *Aloes*, which differ according as they are finer or coarser; and likewise in regard to the Places whence they come and where they are made. The finest or purest is the *Succotrine Aloes*, so call'd either because the *Aloes* is a concreted Juice, which the *Latins* call *Succus Concretus*, or because the best comes from the Island *Succotora*, or *Socotra*, near *Moco* in the *East Indies*. The Inhabitants of that Island draw this Juice from the Root of the Plant; and after it has settled they pour it off by Inclination into a Vessel capable to bear the Fire; and when it is reduced to an Extract they put it in very thin Bladders for Convenience of Carriage, and in that Condition it will keep a long Time, as we find.

Chuse the finest, clearest, smoothest *Aloes*, that when broken is transparent, and being powder'd yields a fine golden yellow Colour, that is of a bitter Taste, without Smell; the smallest, thinnest, lightest Bladders are esteem'd the best. The *Succotrine* Kind is said to be fit for medicinal Use, without any Preparation; but the following Extracts are much more gentle, and properer for all the Intentions of Physick: Dissolve the purest *Aloes* in Juice of Roses or Violets; then digest, strain, and coagulate with a gentle Fire, to the Consistence of an Extract, or Pill, which is call'd the *Francfort*, or Angelick Pill; the last of which Names does not indeed properly belong to it, because the Angelick Pill is a Composition of several Ingredients mix'd together, of which *Aloes* is however the Basis.

Jo. Bauhinus delivers the Method of collecting the three Kinds of *Aloes*, distinguish'd into *Succotrine*, *Hepatick*, and *Caballine*, or *Horse Aloes*, after the following Manner: They take the Herb call'd *Aloes*, being first cut in Pieces, then bruising, they press out the Juice of it, which they put up into a Vessel of a long and round Shape, letting it stand for the Space of twenty-five Days; in the mean while they take Care to clear off the useless Scum, and throw it away; as also the upper

upper Part of the Juice, until such Time as some Difference appears in its Colour and Consistence. The purer Part of this Juice, being concreted, is call'd *Succotrine Aloes*; the remaining Part of it, being of a little darker Colour, is call'd *Hepatick Aloes*; and from the Dreggs, or Settlings of it, is made that Sort of *Aloes* call'd *Caballine*, or *Horse Aloes*.

At *Paris*, in the Beginning of the Spring, they obtain a most pure *Aloes*, by cutting off the Leaves of the common *Aloes*, and hanging them up by a Thread, and then putting a Dish or Platter under them, a yellowish and exceeding bitter Juice drops out of them into the Dish; which afterwards coagulates into a pure and clean Sort of *Aloes*. This Drug loosens the Belly, destroys Worms, and subdues a preternatural Acid. It likewise removes Putrefaction, or prevents it, being given in Substance from half a Dram to two Scruples. It is also good in Obstructions of the Womb and the Green Sickness; and particularly prevalent in restoring a dejected Appetite.

Aloes is seldom or never prescrib'd in Potion, by Reason of its intense Bitterness; but is often prescrib'd in Pills, being the Basis of all, or most of those purging Pills, to be met with in Authors and Dispensatories. In the City of *Goa*, as *Garcias* relates, they give *Aloes* well bruised, and mix'd with Milk, to those that are afflicted with Ulcers in the Kidneys or Bladder, and void purulent Urine, and by that Means they are cured in a little Time. You must forbear the giving *Aloes*, or any Medicines containing *Aloes*, to those that are subject to the Bleeding Piles, and the overflowing of the Courses, as also to such as are subject to a spitting or vomiting of Blood, and to Women with Child, unless it be first corrected as hereafter taught. But, on the other hand, it may be given properly and successfully enough to Persons subject to Melancholy, the Jaundice, and other Distempers, wherein the first Passages are tainted with vicious Crudities.

Aloes consists of two Parts, or different Substances, whereof the one is saline, the other is sulphureous: The saline Part is dissolv'd by watery Menstruums, such as common Water, distill'd Waters, and the Juices of Plants. The sulphureous Part is dissolv'd by Spirit of Wine, or any other inflammable Liquid. They commonly make use of the Juice of Roses, or Violets, to dissolve it in; but it is far better in fair Water; for by that Means the saline Part is wholly separated from the gross sulphureous Part, which is viscous, and like a Jelly. This gross Substance adhering too closely to the Intestines, is apt to produce a fruitless Desire of going to Stool, call'd a *Tenesmus*, and sometimes bloody Stools; for by its opening the Mouths of the Arteries answering to the hemorrhoidal Veins, the Blood is poured

forth. Wherefore, its Extract, prepar'd with Water, is a great deal better than the crude *Aloes*; and more advantageous and proper than the *Aloes*, *Rosat*, &c.

Some prescribe *Aloes* toasted, by which Means it is depriv'd of its harsh Sulphur. This has been found by Experience to be very helpful in all Sorts of Fluxes of Blood. When *Aloes* is dissolv'd in the Juices or Decoctions of Plants, it is call'd the Infuccation of *Aloes*, or *Aloes* infuccated: Wherefore, according to the different Intention of the Physician, it may be dissolv'd in the Juice of Asarabacca, Infusion of Sena, and the Tincture of Scammony or Jalap, that its purging Faculty may be augmented. By a chymical Resolution, *Aloes* affords a large Quantity of Oil, and but a very inconsiderable Quantity of urinous Spirit.

5. Of Hepatick Aloes.

Within these few Years last past we have brought from the *American* *Pomet*. Islands a thick Juice, which the *French* make from the Root and Leaves of the *West-India Aloes*, describ'd in the Cut with its Flower and Fruit. This *Aloes* is brought us in Gourds or Calabashes of different Sizes and Weight; that is to say, from two Pounds to a hundred, and more, which is very extraordinary; but I can affirm the Truth of it, as I have by me a Shell of it which weighs an hundred and two Pounds Weight.

Chuse such as is of a Liver Colour, from whence it takes the Name of *Hepatick*, from the Word *Hepar*, which signifies Liver, and the least stinking that may be. There are two Sorts of it, the *Hepatick*, properly so call'd, and the *Caballine*; the *Hepatick* is the finer Sort of the two, and is given both to Men and Horses; it is of a lighter Liver Colour, fine and clear, and not very fetid in Smell. The *Caballine* is the coarser Sort, black, hard to be broken, and often adulterated. This is *Horse Aloes*, and ought not to be given to Men: The common *Hepatick Aloes*, sold in Shops, is scarcely any Thing else but the *Caballine*, of a strong fetid Smell, and very coarse: The *Hepatick*, *Barbadoes*, or *West-India Aloes*, is also of a fetid Smell, but much finer than the *Caballine*, and is brought over in Gourds, Pots, and Casks; that in Gourds is the best, and the finest; that in Pots indifferent, but not so good as the other; that in Casks is moist, and the worst of all.

Aloe vel Aloes, is the thick or concreted Juice of a Plant, call'd by the *Lemery*. same Name, that grows of several Sizes, according to the Soil and Climate; they are to be met with in *Spain*, and many other hot Countries; the Leaves proceed from a Root that is long, large, very thick, fleshy, firm, indented, sharp on the Edges, fat and full of Juice: There rises from the Middle of a large Stalk, which carries



White Poppy.

3



Black Poppy.



3

Glaucium



4

Persian Aloe

ries on its Top white Flowers, deeply slash'd in or divided into six Parts, which are succeeded by oblong, or as it were, cylindrical Fruit, divided each lengthways into three Partitions full of flat Seeds: The Root is of the Shape of a Stake fix'd in the Ground; all the Plant is extremely bitter, and grows in the Southern Climates, as *Egypt*, *Arabia*, *Spain*, and *America*.

Some Naturalists say, that the *Aloes* Plant flowers not but from one hundred Years to another; that when the Flower opens, or blows, it makes a Report like a Gun; and that the Stalk rises up all at once, and grows prodigiously in a little Time: But this is not confirm'd from the Royal Garden at *Paris*; and on the contrary, the *Aloes* has been seen there to flower without any such Prodigy. The *Aloes* is divided into three Kinds; the *Succotrine*, the *Hepatick*, and the *Caballine*: All the Kinds are purging, and the Body is made of a watry Part, and a resinous; in the watry Part the purging Faculty resides. The resinous is of no Use for this Purpose, but rather of ill consequence, being that which induces Gripings. For this Reason it is always wash'd or cleansed before it is used, and then it may be taken with Ease and Safety. This is to be observ'd, that *Aloes* is not to be given too often, nor in too great a Quantity, lest it fret the Stomach and Bowels; nor to such as are troubled with a Flux of the Womb or Belly, or such as have a Bloody Flux, or Women with Child; nor to such as are hectic, or have burning Fevers, or are of a hot and dry Habit of Body, or who are emaciated, lean, and wasted away; nor to Children of thin, lean, hot and dry Constitutions; especially in hot Weather, when the Air is in an extreme dry Temperature.

[The three Kinds of *Aloes* are the Juices of three different Plants; the *Socotrine*, of the *Aloe Succotrina angustifolia Spinosa flore purpureo*, B. Prodr. 2. 12. *Aloe Americana serrata floribus Coccineis*, Par. Bat. Pr. 306.

This grows in *Socotora*, or *Zocotra*, an Island in the Streights of *Babelmandel*.

The *Hepatick*, or *Barbadoes Aloes*, of the *Aloes*, C. B. Pin. 286. J. B. 3. 696. R. Hist. 2. 1195. *Aloe Dioscoridis*, Column. Eph. 1. 40. *Aloe Dioscoridis, et alisrum*, Sl. Cat. Jam. 15.

And the *Caballine* of the *Aloe Guineensis Caballina vulgari similis sed tota maculata*. Com. Pr. Bot. 40.

The *Socotrine* is the only Kind now order'd to be used in Medicine, except for Horses.]

6. Of Hypocistis.

THE *Hypocistis* is a concreted Juice made from a Kind of Sucker that arises from the Root of an Under-

Shrub, call'd *Cistus*, very common in *Provence* and *Languedoc*, from whence we bring the *Hypocistis* we sell. Mr. *Charas*, and after him Mr. *Meuve*, have well describ'd the Shape and Colour of this young Shoot, as well as the Shrub that bears it; the Figure of which I thought sufficient to give you, as engrav'd from the Original.

Chuse *Hypocistis* that is boil'd to a good Consistence, like Juice of Liquorice; that is to say, firm, of a shining black, the least burnt, the most astringent to the Taste that may be, and that which is true. I name the true *Hypocistis*, because Mr. *Meuve* says, that the Apothecaries, who would deceive the World, generally use the Juice of the Root of Goats-beard dry'd in the Sun. But I can never believe this for several Reasons; first, because the *Hypocistis* is an Extract that is sold very cheap; as well because the Buds are very common in *Provence*, as by reason they yield a great deal of Juice, and the Extract of the Root of Goats-beard is worth more than the true *Hypocistis*: And besides, Mr. *Charas*, from whom Mr. *Meuve* principally copies, makes no mention at all of it.

This Juice is cold and dry, therefore it thickens and binds strongly, and is used chiefly to stop all Fluxes of the Belly, Womb, and Stomach; it stops vomiting and spitting of Blood, from Bruises. *Acacia* is often used instead of it, but is not so effectual and good. This Juice is depurated by dissolving it in Water or Wine, and inspissating; it is made up into Rolls or Troches to stop spitting of Blood, and Fluxes, Catarrhs, &c. The Tincture checks a Gonorrhœa, and the Whites; heals a Corrosion of the Bowels, occasion'd by the Sharpness of Humours: A Lo-hoch made of it, with Wine and Honey, is chiefly used against Ulcers in the Lungs, Stomach, and Bowels.

Hypocistis, is a Kind of *Orebanche*, or a Sort of Sprig or Shoot that grows, *Lemery*. in Spring-time, upon the Foot or Root of the *Cistus*, which is very common in hot Countries, as *Provence*, *Languedoc*, &c. and bears Leaves that are almost round, hairy, rough, whitish, and the Flowers purple. The Shoot grows about half a Foot high, of an Inch or two's Thickness, and sometimes more, being round, and much larger at Top than at the Bottom; brittle, and of a yellow Colour, full of Juice, having certain Rings or Knots from one Place to the other, like Water-Lilly Root. They cut this little Plant towards *May*, when they bruise and draw from it, by Expression, an acid Juice, which they evaporate over the Fire, to the Consistence of an Extract, that is hard and black as the Juice of Liquorice, but in Shape of little Cakes, for the Convenience of Carriage. This is call'd, according to the Plant, *Hypocistis*. It ought to be
f f chosen,

chosen, fresh, heavy, black, without the Smell of burning, of an acrid astringent Taste : It contains a great deal of acid essential Salt, intimately mix'd with Earth and Oil. It is proper to stop Looseness and Vomiting, and to put into any strengthening and binding Plaisters.

[The *Hypocistis* Juice is the inspissated Juice of the *Hypocistis*, Park. J. B. &c. *Hypocistis purpurea flore candicante et flore luteo*, Tourn. Coroll. *Orobanche quæ Hypocistis dicitur*, Rai Hist. *Orobanche minor a Cisto*, Hist. Ox. It is an Ingredient in many Compositions, but never is heard of in extemporaneous Prescription, and is generally found basely adulterated in the Shops.]

7. Of the true Acacia.

Pomet. THE true *Acacia* is an inspissated Juice brought to us in Lumps of five or six Ounces Weight, wrapt in very thin Bladders : It is got by Expression from the Seeds of a thorny *Egyptian* Shrub of the same Name ; and being dry'd in the Shade, is blackish, if the Seed it was expressed from was ripe ; if not, it is reddish or yellowish, and some express it from the Leaves and Fruit together.

Chuse that which is boil'd to a good Body, of a dun Colour, that is to say, of such a brown as is inclinable to red ; it ought to be smooth, shining, of an astringent Taste, but not unpleasant : It is very little used, and therefore not much bought up by the Druggist and Apothecary, who, if it is call'd for, generally use the *German Acacia*, which is made of the Juice of Sloes, boil'd to the Consistence of a solid Extract, then put in Bladders, as the *Egyptian* Sort, which it is like in the Form, but not in the Colour ; for the true is of a brownish or dark red, as aforesaid ; and the *German Acacia* black as the finest Juice of Liquorice.

Acacia vera seu Egyptiaca, the true *Lemery*. *Acacia*, or that of *Egypt*, is a thick

Juice, very heavy, of a brown, reddish Colour, which is brought in the Shape of Balls, that weigh about five or six Ounces, ty'd up in very thin Bladders : They say it is made from a Fruit almost like Lupins, contain'd in Pods which are borne upon thorny Trees in *Egypt*, whose Branches are pretty much extended, bearing fine white Flowers. Chuse that which is neat, solid, weighty, of a blackish Colour, something reddish, shining, easy to break, and of a styptick Taste. It affords a good deal of Oil and essential Salt ; is astringent, incrassates or thickens the Humours, strengthens and relists Poison, stops Hemorrhages and Fluxes, and is good for Indispositions of the Eyes. As the true *Acacia* is sometimes scarce, the Shops use or sell that which is made of the Juice of Sloes, or the Fruit of the Black Thorn,

brought over in round Balls, wrapped up in Bladders, of a very sharp, styptick, or astringent Taste. It is used in *Rob* or *Quiddony*, made with Damask Rose-Water, and double refin'd Sugar. The true *Acacia* is made by Expression out of the Fruit, and that either ripe or unripe. From the ripe Fruit there is a black Juice, so call'd ; from the unripe Fruit a red or yellow Juice, the Colour not so black, but more inclining to red, and of a sweet Scent : And this is the true *Acacia* of *Dioscorides* and the Antients, which is to be used in making of *Venice-Treacle*.

[The Tree which produces the true *Acacia*, is the *Acacia vera*, R. Hist. 1. 966. *Acacia vera seu spina Egyptiaca*, Park. 1547. *Acacia Dioscoridis*, Ger. Em. 1590.

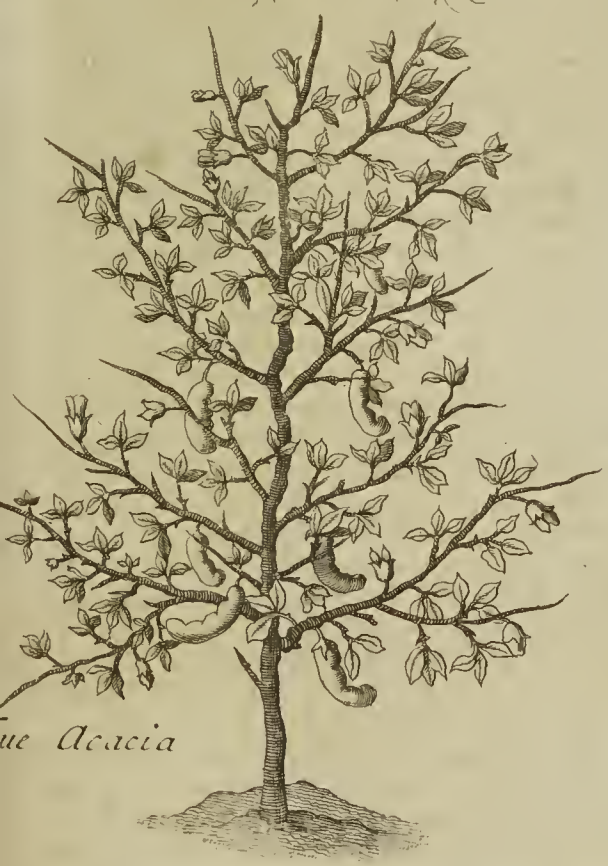
The Juice is, or ought to be expressed from the Fruit before it is ripe, and to be reddish or yellowish within, and black without ; it grows hard and black throughout with Age. It is a good Medicine, but seldom met with genuine : There are a Multitude of different Adulterations of it ; and besides, the Sloe Juice, or *German Acacia*, as it is call'd, is generally used in its Place.]

8. Of Roucou or Rocoe.

THE *Roucou*, which the *Indians* call *Achiotl*, or *Urucu* ; the *Dutch*, *Or-Pomet*. *leane* ; and we, *Roucou* ; is a *Fecula* which the Inhabitants of the *Leward-Islands*, and *St. Domingo*, make from a little red Grain or Seed, which is found in a Husk or Shell, whose Figure is here represented, mark'd A, which was engrav'd after the Original, which I have in my Hands.

The Shrub which bears the *Roucou*, produces, according to *Father du Tertre*, from the Root several Shoots that grow into Shrubs, and divide themselves into several little Branches : The Leaves are very like those of *Lilac*, and it bears twice a Year several Clusters of Flowers, that are white, mix'd with red, and in Shape like those of black Hellebore ; the Flowers are full of a vast many little *Stamina*, or yellow Threads tipped with red : At the Fall of the Flowers come dark-colour'd Seed-Vessels, all hair'd, or bristled with fine little brown Points, which do not prick at all. When they are ripe, there are in the Middle two double Seeds or Kernels, entirely surrounded with a Kind of Vermilion, or liquid red Dye, which the Natives call *Roucou* : 'Tis with this they paint themselves when they travel abroad ; but before they use it, it is mix'd with certain Oils which they draw from some Seeds.

The *Europeans* do it with Linseed Oil ; they beat it in a Mortar with this Oil, and after they have reduc'd it to a Mass, they send it into *France*, &c. where they use it to colour Wax, when it is too pale, and likewise to give a Colour



to Chocolate. There are those likewise who beat it in a Mortar without Oil, and make it into a Mass, or into Cakes; which being dissolv'd in Urine, makes a red Tincture, which stains as well as the best Dye in *Europe*, and is a very good Commodity. This is the Tree which *Scaliger* mentions under the Name of *Arbor finium regundorum*.

This Account of *Roucou* is quite different from that of the *Sieur Francis Rousseau*, who wrote me Word it was a Tree of eight or nine Foot high, whose Leaves were like those of the Peach-Tree; after which came Husks or Shells, much like the Chestnut Shell, furnish'd with little Prickles throughout; within which was a little red Seed, which they bruise in a Mortar, or on a Stone, and put into a Vessel of Water. In short, that the *Roucou* was made in those Islands after the same Manner as we make Starch, and not according as Mr. *Meuve* has describ'd; and that after it was made into Cakes, and dry'd, it was sent hither.

This last Relation is much juster than the first; for as much as the Cods or Husks I have, exactly agree with his Description. Besides, it is easy to see by the *Roucou* which we sell, especially when it is good, that it was never steep'd in Oil, in that the good Smell of the true *Roucou* makes it evident that it has no Mixture. Again, we ought to undeceive those who believe that the *Achiotl* is made as the *Sieur Blegny* describes it, when he says, that it is a thicken'd Juice which is drawn from the Fruit of the *Achiotl*, which is a Fruit-Tree of *America*. That this Fruit is a red Seed or Grain, which is found in great Plenty, in large round Husks or Shells: That when they take this Seed from the Husks, they stamp or beat it in a Mortar, and then press out the Juice, which they set afterwards in a hot Place to evaporate the Moisture; and when it grows thick, almost like Paste, they work it into several Forms or Shapes; which being thoroughly dry, are properly what is call'd *Achiotl*: Upon the whole it is certain, that the *Roucou* is made like Starch, and that it is impossible to draw a Juice from it, since the Matter out of which it is made is a reddish downy Substance, which is found sticking to the Seed that is in the Husks, which they cannot separate but by Means of Water, in the same Manner as our Starch-makers separate the Meal from the Bran to make Starch of; and is not a Juice express'd, or drawn from the Grain, as that Author would have.

Chuse such *Roucou* as is of an Orrice or Violet Smell, the dryest and highest colour'd you can get: *Roucou*, of this Kind, is that which ought to be call'd *Achiotl*; but the chief Part of that we sell is moist, foul, mouldy, &c. so that in a Word it is unfit to be given inwardly, mix'd

in Chocolate, or otherwise. It is astringent and good in Hemorrhages; it is also much used by the Dyers. There was brought formerly from these Islands, and also from *Holland*, a *Roucou* in little Cakes, of the Shape of a Crown-piece, which was endow'd with a great many Excellencies, and very good for internal Uses: What we have brought at this Time is in great square Cakes, like *Marseilles* Soap, or in round Balls, and is sometimes so base and stinking, that it is almost impossible to use it.

The savage *Americans* cultivate the Shrubs that bear the *Roucou* with great Industry, because of the many Uses they make of them: Such as, First, to adorn their Gardens and the Fronts of their Houses. Secondly, being a hard dry Wood, it serves for Fuel. Thirdly, the Bark serves them for Cordage, and to make Linen. Fourthly, they put the Leaves and Root into their Sauces, to give 'em a Relish, and to tinge 'em of a Saffron Colour. Fifthly, from the Seed they make the *Roucou*, as well to paint their Bodies when work'd in Oil, especially on great Days of Rejoicing, as to exchange for other Commodities with Advantage. This gives me an Opportunity to speak of an Extract of Buck-thorn Berries, which is made by pressing out the Juice, and mixing it with White Wine, and a little Alum, and evaporating all to a due Consistency, which is a fine Green for Painters in Miniature. There are excellent Extracts made likewise from black Hellebore, Peony, Tithymal, and wild Cucumbers, call'd *Elaterium*. The Syrup made from these Buck-thorn Berries, call'd *Syrupus Rhamni Catharticus*, or *de Spina Cervina*, is an extraordinary Hydragogue, or Purge for watry Humours, and one of the best strong Purges that is, and therefore good in the King's-Evil, Rheumatism, and Dropsies. This Syrup ought to be made of the ripe Berries, and gather'd about the End of *September*, or Beginning of *October*; but if they are not ripe, they are not so proper to purge withal. There are some solid extracted Juices besides, that are made portable, as the Juice of Liquorice, and some others, too common to require a Description.

Roucou, call'd by the *Indians Achiotl*, or *Urucu*, is a dry Paste, made from a *Lemery*. little red Seed, which is found in a longish Husk or Cod, that has the Shape of the Myrobalans, but prickly, almost like those of Chestnuts. Authors are not agreed about the Kind of Tree or Shrub that bears this Fruit; some saying that the Leaves are like those of *Lilac*, and others, Peach Leaves.

To prepare *Roucou* they bruise or pound the red Seed, then they dilute it with Water, and pass it through Strainers, to separate the Bran, or grosser Parts; afterwards they dry this into a Sort of Flour

Flour or Starch. Chuse the dryest, of a Violet Colour. The Dyers use it chiefly, though it is sometimes made Use of in Chocolate. If it be pure, it strengthens the Stomach, stops Looseness, helps Digestion, promotes Respiration, and provokes to Urine. The *Rhamnus Catharticus*, or purging Thorn, [*spoken of by Pomet*] is a Shrub that grows sometimes of the Height of a Tree, whose Trunk is of a moderate Size, cover'd with a Bark like the Cherry-Tree, whose Wood is yellow; the Branches furnished with some Thorns that are sharp; the Leave pretty broad and green, much less than those of the Apple-Tree, surrounded on their Edges with very fine small Teeth; the Flowers are little, and of a Grass green, succeeded with soft Berries, as big as the Juniper, green at first, but that grow blackish as they ripen, shining, and full of a dark colour'd Juice, tending to green, that is bitter, and has within some Seeds join'd together.

This Shrub grows in Hedges, Woods, and other uncultivated Places. The Fruit is gather'd when ripe, about the Midst of Autumn, and is much in use amongst the Painters, Dyers, &c. It yields Abundance of essential Salt, Oil, and Flegm, besides an acid Liquor, but a very full Portion of Earth. From these Berries, being press'd, a purging Syrup is commonly prepar'd in the Shops, with some of the warm Aromaticks, which purges pretty briskly, and gripes in its working; and therefore ought to be given a little

before Victuals, so that its sharper Force, especially in Children and young People, may be a little ty'd up and blunted by the Aliment, or Food that is taken. This Syrup is prescrib'd from one Ounce to two, being brisk in discharging watry Humours, and therefore very properly given in the Gout, Cachexy, Dropsy, and Rheumatism. The Powder of the Berries dry'd may be given from one Dram to two Drams; but it will be a great deal better to boil them in Broth.

[The *Roucou*, *Achiote*, or *Arnotto*, is made from the Fruit of the *Orleana*, seu *Orellana folliculis Lappaceis*, *Orleana* seu *Orellana*, seu *Uruca*, Par. Bat. Herm. Cat. 464. Prod. 357. *Arbor Mexicana fructu Castaneæ Coccifera*, Rai Hist. 2. 1771. *Mitella Americana maxima Tinctoria*, Tourn. Inst. 242. Boer. Ind. 2081.

It was once much used in Medicine, and made an Ingredient in Chocolate; but at present it is hardly ever heard of on any Occasion in the Shops.

The Buck-thorn Berries are the Fruit of the *Rhamnus Catharticus vulgaris*, Jons. Dend. 236. *Rhamnus Solutius*, Ger. Em. 1337. The Syrup made from them is a rough Purge of much Efficacy among the common People, but not often prescribed alone by Physicians. The Liquorice Juice has already been spoken of in its proper Place.]

End of the VEGETABLES.

Roucou

8

of Roucou Husk or shell

The Negro's making
Roucou



P O M E T's GENERAL HISTORY O F D R U G S:

With what is farther observ'd by *Lemery, Tournefort,*
and others on the same Subjects.

BOOK I. Of *A N I M A L S.*

P R E F A C E.

The Dominion which the Creator has given to Man over all Kinds of Animals of the Earth, Air, or Sea; and the Excellence of the natural Gifts, which He has given him above all other Things which have Life, have not hindered Naturalists who treat of Animals, from comprising Man, at least so far as concerns the Body, in the number of them. And the Experience, which Physicians in different Ages have had of the good Effects, which the Parts, or Excrements, of a dead or living human Body have had in the healing its like in many Diseases, have engaged them often rather to have recourse to it, than to what might be had of Beasts, and to give the proper Descriptions and Preparations of the Parts of the human Body. And most Authors hitherto have, in treating of Animals, and the Preparations made from them for the Use of Physick, begun with the Description of the human Body, either entire, or in its Parts, and have not spoken of other Animals till after their Lord.

The same Reasons have also engaged me to imitate them here, and to place what I have to relate concerning other Animals, after what relates to him who has the Command and Disposal of them.

I shall here decline treating of the great Lights, Knowledge, and Understanding, which the Creator has bestowed on Man, and confine myself wholly to the Matter of the Body, and to the Things which may be found in it, living or dead, proper for the Relief of others in their Sickneses, and for the prolonging or preserving their Days in Health, and to keep myself within the Bounds of my intended Work, and follow the Design I have here, of treating of only such Things, as the Animal, Vegetable, and Mineral World furnish us with, under the Name and Office of Drugs, I judge nothing can be more proper than to begin this Part of the Work with treating of Mummies, which contain in them nearly all the Parts of the human Body.

1 Of Mummies.

Pomet.

AMONGST all the Testimonies of Respect, which Antiquity paid to the Bodies of the Deceas'd, that of a decent Burial was always in the most Esteem; by which last and pious Acknowledgment, they were willing to honour and preserve the Memory of those whose Actions had recommended them in their Life-time, and performed a Work of Charity, tending to the Consolation of the Living, and the Peace and Repose of the Dead. The wonderful Pyramids of *Egypt*, of which I shall speak by and by; the Obelisks engrav'd and carv'd with such Pains and Industry; the *Mausoleums*; and, in short, all the rich and pompous Monuments, found throughout the World, are certain Proofs of the Piety and Regard of the Antients towards the Dead. But as there are several different Nations and different Religions, so there are particular Customs in paying their last Respect to the Deceas'd. All the Elements have been Partakers of the Spoils of the Dead, the Earth not having been thought sufficient alone to take care of the Relicks.

History informs us, that the Fire burnt and consum'd the Bodies of the *Greeks*, *Romans*, *Gauls*, *Germans*, and several other Nations: That the People of *Colchis* hung their dead Bodies in the Air, upon the Branches of Trees: That the old Inhabitants of the *North* found their Graves at the Bottom of the Ocean, as the *Ethiopians* in the Currents of their Rivers; and that the People of the frozen *Scythia* were buried in the Snow. But the most ancient Kind of Burial was that of interring the Bodies, and we have Reason to believe, that *Adam* himself was buried after this Manner.

It was from the *Jews* that the *Christians* learned the Interment of the Dead, making Pits or Graves in subterraneous and retired Places, call'd Tombs, or Catacombs, and most usually Cemeteries, or Dormitories, that is, sleeping Places: But before Burial they were embalm'd after a very curious and surprizing Manner, as shall be shewn. The first and most costly Kind of Embalming was valued at a Talent of Silver, which may be computed at about Eight hundred and fifty Livres, at that time of Day; but reckon'd now would amount to Eight thousand Livres, or Five hundred Pounds Sterling and upwards.

This Embalming was us'd to none but Persons of the first Quality. Three People were us'd to be employed in the Operation; one was a Kind of Overseer, who marked out such

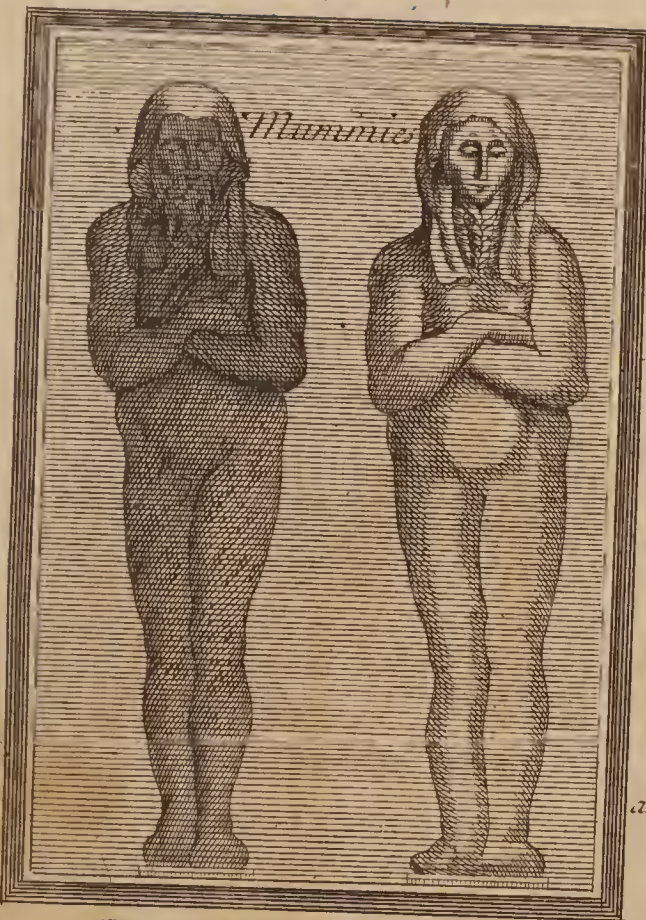
Places of the Body as were to be opened to take out the Bowels. The next was a Dissector, who, with a Knife made of an *Ethiopian Stone*, cut the Flesh as much as was necessary, and as the Law would permit, and immediately after fled away with all the Expedition imaginable; because it was the Custom of the Relations and the Domesticks to pursue the Dissector with Stones, and do him all the Injuries they could, treating him as an impious Wretch, and the worst of Men. After this Operation, the *Embalmers*, who were reckoned as Holy Men, entered to perform their Offices; and began first, some to remove the Bowels in the upper Cavity, excepting the Heart and Reins; and others to cleanse the lower Belly, which they wash'd with Palm Wine, or other aromatical Liquors; and during the Space of above thirty Days, they wash'd the Body with Balsam, Gum, or Resin of Cedar, and fill'd it with Powder of Myrrh, Aloes, *Indian Spikenard*, *Bitumen* of *Judea*, and other Things of the like Nature; but they never us'd *Frankincense*, which we now call *Olibanum*; either because of the great Veneration for that Drug, or by Reason of its Scarceness. As to the Head, they us'd Iron Instruments which they thrust up the Nostrils, and drew out that way all the Substance of the Brain; and afterwards they syring'd up precious and odoriferous Liquors.

The second Sort of Embalming was reckoned at half a Talent, which was us'd to the middle Sort of People, where they contented themselves only to syringe the Body, or make Injections into the Bowels of Water, or a Decoction made of Simples, or other Drugs, and Oil of Cedar; and afterwards, when the Body was thus prepar'd, to put it into Salt for Seventy Days; after which Time they took it out, and having open'd it, they drew out the Intestines, which were almost wholly consum'd. This done, they wrapt all the Body in Bandages of fine Linen dipp'd in Myrrh and *Asphaltum*; and the Overseer, whom they call'd the *Scribe*, cover'd the Wrappings with a painted Cloth, whereon was represented the Rites of their Religion, in *Hieroglyphick Characters*, and the Animals which the Dead had lov'd most.

The History of the Beetle.

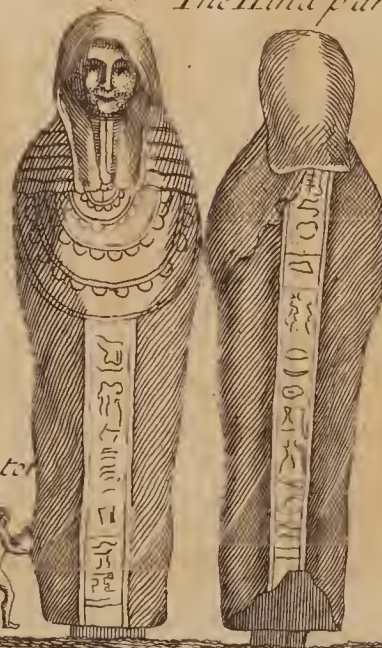
The Principal of all those Animals, or that for which the *Egyptians* had most Veneration, was the *Beetle*; as well because of its wonderful Birth or Production, as from the Analogy or Resemblance they pretend this Animal has with the Sun, and, indeed, however base and low this Animal may appear to us, as always living in Dung, he yet has a strange

of Animals.



Mummies

A Mummy. The Hind part.



A Paged.

a Diffector



An Embalmer.



a Body Embalmed.



An Egyptian Pyramid

The Designer or Engraver.

strange Instinct to continue his *Species*. For this little Animal breeds without the Aid or Assistance of any Female; for when the Male would produce, he seeks out the Dung of an Ox or Bull, and having found it, he forms a round Ball, of the Figure of the World, which with his hind Feet he turns from East to West, and turning himself towards the East, he imitates the Motions of the World. Having thus roll'd the Ball, he puts it in the Ground, and leaves it there twenty-eight Days, which is the Time in which the Moon passes through the Signs of the Zodiac; and during that Time the little Beetles hatch in the Ball; and the twenty-ninth Day, which is the Day of the Conjunction of the Moon with the Sun, and the Time Productions are made in Nature, this little Animal rolls its Ball into the Water, where it opens, and the Beetles get out. It is upon this Account some say, that it is made the Emblem of *Birth*, and the Symbol of Fathers; because these Insects have only a Father, and no Mother. They represent also the World, because of the Ball which they form and turn round; and Man, because there are none but Male Beetles. They are of several Kinds, but those for which the *Egyptians* have the greatest Veneration, are such as have a Head like a Cat, surrounded with a kind of Rays, which give Occasion to them to believe that these Animals have some Analogy to the Sun; and the more, because this Insect has thirty little Paws, made like Fingers, which represent the thirty Days that the Sun takes each Month in his Course. As to the other hieroglyphical Characters, the History of them is too tedious, but they may be seen in *Father Kircher*.

The third Sort of Embalming was for the poorer People, which was made with a Mixture of *Pitch*, and *Bitumen* of *Judæa*; or the Bodies were dried with *Lime*, or other Drugs of little Value; and sometime they us'd *Egyptian Natrum*, *Salt*, *Honey*, and *Wax*: Sometimes likewise they boil'd the Bodies in Oil to consume the Moisture, which is the only Cause of the Corruption; for the Principle of Corruption, according to a learned modern Author, is a moist Heat, that introduces itself into the Flesh by the Dissolution of the Parts, and by the Mixture of heterogeneous Bodies, which possess the Spaces which the Heat opens and enlarges. The Air, which is hot and moist, is the most common Dissolvent of all Bodies; and the only Way to preserve them, is to defend them from the Air; to which we may add, that the Air being full of an infinite Number of Insects, which we cannot perceive because of their Minuteness, they are these little Insects that adhere to the Flesh and prey upon it; and as they

easily increase, there are Seasons wherein all the Air is full of them, especially in Times of the Plague, and other malignant and contagious Diseases: And it hath been observed, by Microscopes, that what we call a *Gangrene* is nothing else but a vast Number of little Insects eating the Flesh, as Mites do Cheese. Therefore there is no other way of keeping Flesh, but by excluding these Animals, which is done by Means of Honey, Oil, Spirit of Wine, and some other Liquors, that fetter and entangle, or burst these Insects.

But the Curiosity of the ancient *Egyptians* went much further, because of the great Veneration they had for their deceas'd Relations, which they suffered not to be interr'd, or conveyed out of their Sight, but rather sought out Ways to have them continually before their Eyes, to the End that they might imitate their Actions; that is to say, live according to the Honesty and Integrity of their departed Friends, having such Regard to their Actions as to make them the Rule of their future Conduct.

For which Reason, when any of their Kindred died, they manag'd them so exquisitely, and dried them after such a Manner, that their Bodies became as hard as Marble Statues, and they called them in their Language, *Gabbaras*, which signifies *Mummies*; and their Art of preparing them was so nice, that nothing in them was disfigur'd. They would paint their Faces of the several Colours; after they had been embalm'd, their Arms were placed across, the one upon the other, and bound about with fine Linen, which had been before dipt in aromatical Gums; and then they put upon the Head a Napkin, like a Woman's Coif, that hung down on both Sides upon the Breast, and behind upon the Shoulders. They had besides, under the Chin, a twisted Neckcloth, that served to squeeze their Cheeks together, and tie their Jaws close, so that they could not fall; and thus they appear'd rather like Persons asleep than dead.

If by any Sickness they were disfigur'd, they clapt over their Faces Masks of Pasteboard, or of painted Cloth, resembling the dead Person, and embellish'd or adorn'd with the several Colours. On the contrary, if the Person was not disfigur'd, they left the Face and Ears naked, and so painted them as they pleas'd. The Dead being thus order'd, they were put in great Cases of Glass made on purpose, according to the Grandeur of the Person; afterwards they plac'd them in the most elevated or highest Part of their Houses. And this they reckon'd such a valuable Pledge and Token of their Faith, that if any of them

them happen'd to want Money, he could not give a better Security than the embalmed Body of his Relation in its Case; and that which made it esteem'd so, was, that they would spare no Pains to pay the Money again; for if by Mischance the Debtor could not redeem this Pledge, he was reckon'd unworthy of Civil Society, which engag'd him indispenfably to find out Ways to recover his Kinsman in the Time limited, otherwise he was condemn'd by all the World.

The *Egyptians* were at other Times at a great many other Expences for preserving their Bodies: For after they were embalm'd (though not dried) with several precious Drugs, and wrap'd about with a great deal of fine Linen; as sometimes they us'd above two hundred Ells of Bandage, so that nothing was seen but the Face, and sometimes nothing at all; they were likewise put up in Boxes or Coffins of precious Wood, which the Dead had caus'd to be made while living, together with the Idol or Pagod, which they worshipp'd in their Life-time, and before they were buried the Nails of their Hands and Feet were stained red with *Alkanet*. The Idols or Pagods were made of Gold, and Silver, and other Metals, but most usually of the Clay of the Country, with hieroglyphical Characters, which denoted the Quality of the Dead, the Charge of the Embalming, the Time of their Death, and the Place from whence they came.

After they had shut up the Coffins of their deceas'd Friends, they carried them, with great Pomp, into the Places which they had caused to be built in their Life-time, as is to be seen at this Day by the Pyramids of *Egypt*, which are two or three Leagues from *Grand Cairo*. And Historians relate, that *Chemmis*, King of *Egypt*, made one, about which an hundred thousand Men were employed for twenty Years, which was of a square Figure, and the Face or Front on each Side of the Basis, was eight hundred Foot broad, and of the same Height, in which was a perpetual Lamp. We may see, by this, what Care was taken of the Dead; and we ought to undeceive those who are so credulous as to believe, that those are true *Mummies* which are brought us to sell again as a Commodity, they being only Bodies pitched over, as we shall relate presently.

Besides these pretended *Mummies*, and the former, we meet with another Sort; those of *Africa*, which are call'd white *Mummies*, and are nothing else but the Bodies of those that are drown'd in the Sea, which being cast upon the *African* Coast, are buried and dried in the Sands, which are very hot; and though they have been lusty Men in their Lives, after they have lain some Time

there, they weigh not above thirty Pounds, and are then in a Condition of keeping for ever. There is one in *Paris*, in the Cabinet of Mr. *Boudet*, Nephew to Mr. *Boudet* the King's Physician. These *Mummies* are little us'd, because they are both dear, and have little or no Virtue in them.

We shall next give some Account of the *Jews* carrying on their Rogueries, as to these *Mummies*, and after them the *Christians*. I shall first observe, then, that the *Mummies* that are brought from *Alexandria*, *Egypt*, *Venice*, and *Lyons*, are nothing else but the Bodies of People that die several Ways, whether bury'd or unbury'd, that are afterwards embowell'd, and have their several Cavities fill'd with the Powder, or rather Sweepings of Myrrh, Caballine Aloes, Bitumen, Pitch, and other Gums, and then wound about with a *Cercloth* dipt in the same Composition. The Bodies being thus prepar'd, are put into an Oven to consume all their Moisture; and being well dried, are brought and sold here for true *Egyptian Mummies* to those who know no better, and don't understand that the *Egyptians* put the greatest Value imaginable upon their Dead, and that what they did in this Kind was to preserve the Memory of their Friends, and not to make a Trade of them. To prove what I say, I shall relate what Mr. *Guy de la Fontaine*, the King's Physician, and after him *Ambrose Parey* have said.

The *Sieur Guy de la Fontaine*, being at *Alexandria* in *Egypt*, went to see a *Jew* in that City, who traded in *Mummies*, that he might have ocular Demonstration of what he had heard so much of. Accordingly, when he came to the *Jew's* House, he desired Leave to see his *Mummies*; which he having obtain'd with some Difficulty, the *Jew* at last opened his Magazine, or Store-house, and shew'd him several Bodies piled one upon another. Then after a Reflection of a Quarter of an Hour, he ask'd him what Druggs he made use of? and what Sort of Bodies were fit for his Service? The *Jew* answered him, that as to the Dead he took such Bodies as he could get, whether they died of a common Disease, or of some Contagion: And as to the Drugs, that they were nothing but a Heap of several old Drugs mix'd together, which he apply'd to the Bodies; which after he had dried in an Oven he sent into *Europe*; and that he was amazed to see the *Christians* were Lovers of such Filthiness.

This is very different from what the ancient Physicians imagined, when they prescribed *Mummy*. But as I am not able to stop the Abuses committed by those who sell this Commodity, I shall only advise such as buy, to chuse what is of
a fine

a fine shining Black, not full of Bones or Dirt, of a good Sinell, and which being burnt, does not stink of Pitch. This is reckoned proper for Contusions and to hinder Blood from coagulating in the Body; it is also given in Epilepsies, Vertigoes, and Palsies, the Dose is two Drams in Powder, or made into a Bolus. It also stops Mortifications, heals Wounds, and is an Ingredient in many Compositions.

Some Authors will have it, that the Fat, mix'd with *Bitumen* that flows from the Tombs, is the *Asphaltum* and true *Mummy*; and others say that it is the preserv'd Flesh, which was brought into Use by a *Jewish* Physician, who wrote, That the said Flesh, thus preserv'd and embalm'd, serv'd for the Cure of several Diseases. They have likewise given the Name of *Mummy* to several natural Bitumens; as that of *Judaea*, and those which flow from several Mountains of *Arabia*, and other hot Countries: But those Appellations are very improper, they being fat, viscous, stinking Humours, that breed in the Entrails of the Earth.

Of other Preparations made from Human Bodies.

Besides the *Mummy* that is met with in the Shops, we sell human Fat or Grease, which is brought us from several Parts; but, as every Body knows in *Paris*, the publick Executioner sells it to those that want it; the Druggists and Apothecaries sell very little: Nevertheless they vend a Sort of it that is prepar'd with aromatical Herbs, and which is, without Comparifon, much better than that which comes from the Hands of the Hangman. This *Adeps*, or *Axungia*, is reckon'd very good for Rheumatisms, and other Diseases proceeding from a cold Cause. Besides the Fat, we sell the fix'd and volatile Salts of the Blood, Skull, Hair, and Urine, and other Chymical Preparations, to be found in Mr. *Charas's Royal Pharmacopœia*, &c. which those who desire to know further about these Preparations, may have recourse to. As to the Choice of all these, the only Rule is to buy them of honest People, for otherwise the best Judges may be deceived in them.

Man's Grease is emollient, discussive, anodyne, and antiparalytick. It is good against the Gout, and contracted Nerves, made into an Ointment, as follows: Man's Grease, two Pounds; Gum Elemi, half a Pound; Bees-Wax and Turpentine, of each one Pound; Balm of *Gilead* or *Peru*, four Ounces; mix and make an Ointment, by melting all together. Man's Skull is a specifick Medicine in the Cure of the Falling-sickness, and

indeed of most Diseases of the Head, taking of the crude Powder, ras'd from the fresh Bone of the Skull, one Scruple or two, in any proper spirituous Liquor. The Oil and volatile Salt are for the same Purposes, but in less Quantities.

Of the Moss upon the Human Skull.

The *English* Druggists, especially those of *London*, sell the Heads or Skulls of the Dead, upon which there is a little greenish Moss, which is call'd *Ufnea*, because of its near Resemblance to the Moss that grows upon Oaks; and as Mr. *Charas* staid a considerable Time in *England*, and saw great plenty of them, I have only related what he told me on this Subject. This Moss is an Excrecence that grows two or three Lines high, on the top of and round Men's Skulls who have died violent Deaths, and lain some Time on the Ground, or hung on Gibbets, or the like. It only begins to grow when the fleshy Substance about the Skull is wasted away. The *English* Druggists generally bring these Heads from *Ireland*; where they frequently let the Bodies of Criminals hang on the Gibbet till they fall to Pieces. You may see in the Druggists Shops of *London*, some of these Heads entirely cover'd with Moss, and some that only have the Moss growing on some Parts; and we ought not to be surpriz'd at the Growth of this Moss on the Skulls of dead Men unburied; since we daily see the Hair of the Head, Beard, and some other Parts of the human Body, grow after Death, as long as there is any Moisture left to supply Nourishment to the Part; and that the same thing happens to the Nails is evident; but whether it will hold as to the Teeth, as some pretend, I dare not venture to affirm. The same Druggists send to foreign Countries, especially *Germany*, these Skulls covered with Moss, to put into the Composition of the sympathetick Ointment, which *Crolius* describes in his *Royal Chymist*, and which is very available in the Cure of the Falling-sickness. Some Virtues are also attributed to the Skulls taken from Gibbets, but in all Probability the Heats and Colds of the Seasons have dissipated the greater Part. The Skulls of Criminals newly hang'd, stripp'd of the fleshy Membrane, and the Brains taken out, being well washed and dried, and separated with a Saw from the lower Part, are, or ought to be, what the Druggists sell by the Name of *Human Skull*.

A *Mummy* is the dead Body of a Man, Woman, or Child, which is embalm'd and dried. The first *Mummies* were taken from the Burying-places of the ancient

antient *Egyptians*, near the Pyramids, where the finest were to be seen a few Leagues from *Grand Cairo*. This embalming was made with Balsams, Resin of Cedar, *Jerus Pitch*, Myrrh, Aloes, and several other aromatical Ingredients, capable to dry up the Humidity or Moisture of the Flesh, to stop the Pores, and prevent the Air from entering, and to resist Putrefaction. We use at this Day almost the same Drugs for embalming dead Bodies; but whether it was that their Drugs were better than ours, or that they had a more perfect Method of embalming than we have, or that their Burying-places were drier, more impregnated with Salts and Bitumen, or less subject to Putrefaction, their embalm'd Bodies lasted vastly longer without Corruption, than those we do at present, if we dare believe Tradition; for they pretend to shew us *Egyptian Mummies*, of near four thousand Years Duration; whereas we take a great deal of Pains in these latter Ages, to preserve them two or three hundred Years.

And here it may not be improper to give an Account of the modern Way of embalming, from Mr. *Dicnis's* Course of Chirurgical Operations. Embalming is an Operation almost as antient as the World, and which has been practised in all Ages; and either out of a venerable Regard to their Relations, or a Principle of Religion, Men have always endeavoured to preserve their Dead; of the Truth of which *Arabia* and *Egypt* have furnish'd an infinite Number of Instances; but at present we embalm none but the Rich and Great, whose Relations only are willing to be at that Expence.

Mr. *Penicher*, a *Parisian* Apothecary, has given us a Treatise of Embalming, according to the Practice of both the Antients and Moderns, which consists of several learned Enquiries on this Subject: He relates the Stories of the Embalming of *David*, *Alexander*, and several others; wherefore I refer you to him for the Satisfaction of your Curiosity; but, talking indeed like an Apothecary, he gives us so many Sorts of balsamick Powders, that he would very much puzzle us which to chuse, if we did not know that they are almost all alike. He further pretends, that it is the Apothecary's Right to preside in Embalming; that the Composition and Application of the balsamick Matters belongs to him; and that the Surgeon is present for no other End than to make the Incisions, and fix on the Bandages which he prescribes; but daily Practice overthrows what this Author pretends to advance. 'Tis the Surgeon only who embalms; 'tis he who is charg'd with the whole Operation; and after the Apothecary has prepar'd what he requires, he is not to concern himself any further

in it, unless he will attend as one of the Surgeon's Apprentices or Assistants, to hand to him what he has Occasion for.

Mr. *Penicher* cites, as a Precedent for Embalming, that performed on the Dauphiness. We are not to be surpriz'd if his Relation is not exactly just in several Circumstances; he transcrib'd it from a Memorial which the Apothecary to that Princess gave him; and its Author, believing Pharmacy so much above Surgery, that the latter could not dispute it, has by this Memorial taken all advantageous Hints which seemed to him to favour his Opinion. But having performed that Embalming myself, none can be a better Evidence in this Case, the particular Relation of which, to avoid Repetition, I forbear here, because the Method which I shall lay down, of performing a complete *Balsamation*, will inform you of all that passed at that of the Dauphiness.

After the Opening of the Body, and the drawing up, and signing of the Relation of the Particulars to be observ'd with regard to the Body, the Physicians and Surgeons withdraw, leaving to the operating Surgeon the Care and Direction of the Embalming; wherefore, all depending on him, he causes to be brought into the Chamber where the Corps is, all the necessary Ingredients and Instruments for that Operation; and which we know to be of three Sorts: First, those which the Plummer is to make; secondly, what belongs to the Surgeon; and, thirdly, those which relate to the Apothecary.

The Plummer being sent for, comes to take the Surgeon's Order about the Size of the Coffin; because if he should content himself with taking Measure of the Body, that Case would prove too little to hold it after embalming: He bespeaks of him a leaden Barrel to put the Entrails into; and also a leaden Box made of two Pieces, to shut, to contain the Heart after it is embalmed; ordering him to bring all of them to the Chamber where the Corps is, at the Hour which he appoints. The principal Part of the Surgeon's *Apparatus* consists in Bands; for the Instruments are the same which are us'd in opening of the Body. The Surgeon then is to prepare five Bands; two of three Fingers Breadth and four Ells long, to bind the Arms; two of four Fingers breadth and six Ells long each, to bind the Legs and Thighs; and one yet broader and longer, to perform the necessary Circumvolutions about the Body. 'Tis the Apothecary's Business to furnish, first, the aromatical Plants well pulveriz'd in a Mortar; secondly, the Gums and odoriferous Drugs beaten to a fine Powder; and, thirdly, a Liniment to rub over and anoint the Body.

The

The first or coarsest Powder, which serves to fill the great Cavities, and to be put in with the Entrails, is compos'd of four or five and twenty different Plants; to which end we make use of the Leaves of some of them, the Roots or Flowers of others, and the Rinds, Barks, or Seeds of others. The most proper, and the most easy to be gotten, are the Leaves of Laurel, Rosemary, Sage, Baum, Wormwood, Marjoram, Hyssop, wild Thyme, Basil; Roots of Orrice, Angelica, Calamus Aromaticus; the Flowers of Roses, Camomil, Melilot, Lavender, Lemon and Orange Peel; the Seeds of Anise, Fennil, Coriander, and Cummin: To all which, when well powder'd, are to be added so many Pounds of common Salt, as to increase the whole to thirty Pounds Weight. Of the other, which is the finest Powder, there must be ten Pounds, and it is to be compos'd of ten or twelve odoriferous Drugs, which are proper to preserve the Body for the Space of several Ages; they are Myrrh, Aloes, Frankincense, Benjamin, Storax Calamita, Cloves, Nutmegs, Cinnamon, white Pepper, Sulphur, Alum, Salt Petre; all which are to be well powdered, and pass'd through a Sieve. The Liniment is to be compos'd of Turpentine, Oil of Laurel, liquid Storax, and Balsam of Capivy, by reason that of Peru is so scarce, that it alone would cost more than all the embalming Ingredients. Three Pounds of this Liniment are sufficient to make the necessary Embrocations. Besides these three Articles, the Apothecary is to provide three or four Pints of Spirit of Wine, five or six great Bundles of Tow and Cotton, two Ells of the broad Cerecloth, and a large Bundle of coarse Cord. The Surgeon provided with all these Preparations, is ready to begin the Embalming, which he executes in the following Manner.

Having ordered to be set near him the leaden Barrel, the Surgeon takes some Handfuls of the coarser Powder, and spreads it over the Bottom of the Barrel, and above that spreads Part of the Entrails; then lays another Row or Bed of that Powder, and then another Lay of the Entrails, thus continuing on, *Stratum super Stratum*, till he has laid into the Barrel all the Parts which were contained in the Head, Breast, and Belly, except the Heart, which he separates, and puts to soak in Spirit of Wine, till he has finished the whole Body. When he embalms that in particular, he must remember to end with a Lay of Powder, and if the Barrel is not full, he is to fill it up with a Bundle of Tow; but if the Plummer has made it too high, the Operator is to order him to cut off all of it that is too long, that the Cover being folded on, no Part of it may remain empty.

The three Venters or Cavities being thus evacuated, we are to wash them with Spirit of Wine,

before we fill them up; which done, we begin with the Head, filling up the Skull with the Powder and Tow mix'd together; and having got in as much as it can contain, we put it again into its Place; and before we sew the hairy Scalp over it, we put betwixt them some of the finer or balsamic Powder. We pour some Spirit of Wine into the Mouth to wash it, and then fill it with the same Powder and Cotton; we do the same to the Nostrils and Ears, and then with a Pencil or Brush we embrocate the Face, Head, and Neck, with a Liniment; and after strewing the fine Powder on all those Parts, we form a Crust over the whole Superficies. With the Powder and Tow the Operator fills up the Breast and Belly, which is now but one large Cavity; for in taking out the Entrails he has before taken out the *Diaphragm*, which separated them one from another. He is not here to be sparing of his Powders, which must prevail in this Part, the Tow being only made use of to bind and keep them together. He returns the *Sternum*, and after having cover'd it with the fine Powder, which he also thrusts betwixt the Ribs and Tegument, he performs the Suture with a Needle, from the Neck to the *Os Pubis*, and a transversal one, from one of the lumbar Parts to the other. With a Pen-knife we make around the Arm four large Incisions of half a Foot long each, and as deep as to the Bone, and as many on the Wrist; these we wash with Spirit of Wine, and fill with the odoriferous Powder. We cover the Arm with the Liniment with the same Pencil, and gently strow over it the same Powders, which easily stick on by reason of the Liniment. We then take a Band, with which we begin at the Hand, rolling it very tight up to the Shoulder, where it is to end, and be fastened. Whilst the Operator is thus employ'd about one Arm, an Apprentice is to do the same to the other, conformable to his Example.

The same Operation is to be performed to the Thighs and Legs, with this Difference only, that the Incisions are to be longer, deeper, and more numerous than in the Arms. These Parts, thus cut, look like *Switzers Breaches*. After they have sufficiently imbib'd the Spirit of Wine, they are to be fill'd with aromatical Powders; the Liniment applied to them, and the Powders over them, the Operator rolls on the Band on one Thigh, whilst a Servant applies another on the contrary: These two Bands begin at the Feet, and terminate at the Groin. We then turn the Body to make the like Incisions on the Back, at the Region of the Reins, and on the Buttocks; and if the Corps be fat, we are also to do the same around the Belly and Breast. The Lotions, Embrocations,

tions, and Application of Powders, are ended with the Belly-band, which is strong, very broad, and long, and beginning at the lower Belly, so perfectly rolls over the Body, that no Part of it is left uncovered.

The Body thus enamell'd, we lay it on a Cerecloth, in which we wholly enclose it, cutting it close so as to come close over all the Parts without folding it; and with a Cord, which is to be ten or twelve Ells long, we begin to straiten it about the Neck, to form the Figure of the Head, that it may be accommodated to that of the Coffin. We run it several Times around the Body, each Circumvolution at the Distance of half a Foot from the other, and draw it as tight as we would a Pack to be sent by the Carrier. The Body is then put into a Linen Shroud, which with a String we tie at each of its two Extremities, leaving about a Handful beyond each of the Ligatures. We then call for the Coffin, ordering it to be brought near to the Table where the Body is; and if 'tis a Princess of the Royal Family, the Lady of Honour is to take hold of the Handful of the Shroud which is left at the Head, and the Lady of the Wardrobe of that at the Feet, and they lay the Corps into the Coffin, which last Service they claim as their Right.

If the Surgeon has any balsamick Powder left, he strows it in the Coffin, and fills the vacant Spaces with Bundles of aromatical Herbs, which he is to have ready provided for that Purpose; which done, the Plummer fixes on the Lid of the Coffin, which he folders on as expeditiously and neatly as he can. Whilst he is foldering the Coffin, the Surgeon embalms the Heart; he takes it out of the China Vessel in which he put it, washes it several Times in Spirit of Wine, and fills its Ventricles with the finest balsamick Powder, reserv'd expressly for that End; then encloses it in a Bit of Cerecloth, wholly sprinkled with the same Powder; he binds and fastens it with the same Cord, shaping this small Bundle in the Figure of a Heart, and so putting it in the Box. The Coffin being foldered, we lay it on two Feet in the Middle of the Room, and cover it with a Pall, and lay on the Coffin the Box which contains the Heart, which we cover with Crape, and leave both of them to be carried to their destin'd Sepulchre.

Some of the Antients pretended to have invented a Way preferable to all others, which was to take out generally all the Flesh, and leaving only the Skin and Bones, to substitute in their Place aromatical Drugs and Powders; tho' this is not to preserve the Body, but only the Skin and Skeleton from Putrefaction. Some Moderns

propose to us easier Ways, of which there are several Sorts, with which Mr. *Penicher* has fill'd his Book; wherefore I shall forbear the Recital of them here, and content myself in acquainting you, that the History of Embalming, which I have just laid before you, is that which I have performed on the Dauphiness, and several Persons of the first Quality, being that which I take to be the best of them all. I have heard of antient Sepulchres of Plaister, in the Middle of which the Body was placed, and also cover'd with Plaister; that in these sort of Graves, the Bodies kept for a long Time, without emitting any ill Scent, because the Salt Petre which is in the Plaister resists Putrefaction; and the Plaister imbibing the stinking Serosities which issue from the Body, stops the offensive Exhalations. This Fact may put some upon reducing it to Practice; which in my Opinion should be done the following Way: The Person resolv'd to try this Experiment, is to order the making either of a leaden or wooden Coffin, proportioned to the Bulk of the Body, which is to be laid into it stark naked; when having ready three or four Hods of Plaister strain'd thro' a Sack, so that it may reach to the Edges, the Corps must be wholly buried in Plaister. By this Method we may keep a Body several Days in the House, and then lay it in a Vault design'd for the Dead, without the Danger of any ill Scent; and 'tis impossible to embalm a Body with more Ease, and less Expence.

[The true *Egyptian Mummies* are very seldom found in the Shops, but are what ought to be us'd in Medicine; the Gums and Spices they abound with, making them very different from the Counterfeits. The next in Goodness to these, is what is called the *Arabian Mummy*, which is a thick Liquor, of a dark Colour and aromatical Smell, flowing out of the Bodies, embalm'd with Myrrh, Aloes, &c.

We also sometimes see the Liquor of *Egyptian Mummies*, which have been preserv'd with the *Bitumen Judaicum*, with the Mixture of other Ingredients, which is not much inferior to the former; but the Thing commonly sold under the Name of this, is the *Pissasphaltum factitium*, which is a Mixture of common Pitch, and *Bitumen Judaicum*.

The white *Mummies* are not the Bodies of such as have been drown'd, but human Carcasses bury'd and dried in the Deserts of *Africa*, as those of *Zara* and *Libya*; where the Winds sometimes bury whole Caravans at once in the Sands, where the Bodies dry and become light, and of the Consistence of Horn. These are never us'd in Physick, nor any of the others often now: and whatever Virtues they have been suppos'd to be possess'd of, may rationally be judged to be more

owing

The Camphur.



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2^d of Johnston's



2^d of Johnston's



3^d of Johnston's

owing to the Ingredients of the Composition they were preserved with, than to the Flesh of the Carcase, and therefore may be had from those Ingredients, in a more decent Manner, than by swallowing the Flesh of our Fellow Creatures.

The other Parts of the human Body, mentioned in the Catalogues of officinal Substances, are the Skull, the Skin, the Fat, the Bones, the Marrow, and the Heart. Virtues have also been attributed to the Hair, Nails, Saliva, Ear-Wax, Sweat, Milk, menstrual Discharges, Secundines, Urine, Dung, Semen, Blood, Stone of the Bladder, and the Membrane enclosing the Head of the *Fœtus*, by several Authors; but few of them are used now. *Sal Armoniac* indeed is a Preparation of Urine and other Ingredients; and the Skull is an Ingredient in the *Pulvis ad Guttetam*; but little other Use is now made of any thing belonging to the human Body.

As to the strange History here given of the Beetle, it may be proper to observe here, that that Animal is produced by the Eggs of a female Parent, which hatch into six-footed pale-coloured Worms, which afterwards change into Beetles, as the Caterpillar does into a Butterfly.]

2. Of the Unicorn.

Pomet. **T**HE Unicorn is an Animal which Naturalists describe under the Figure of a Horse, having in the Middle of his Head a spiral Horn, of two or three Feet long; but as we know not the real Truth of this Matter to this Day, I shall only say, that what we sell under the Name of the Unicorn's Horn, is the Horn of a certain Fish, by the Islanders called *Narvual*, or the *Sea-Unicorn*, as you will find when we come to treat of Fish. This Horn was formerly in great Esteem, because of the mighty Virtues attributed to it by the Antients, especially against Poisons, which is the Reason that many great Personages have been very fond of it; so that it has been valued at its Weight in Gold. And there are yet some People, who esteem it as highly.

Ambrose Paræus, in a little Treatise which he wrote of the Unicorn, says, That in the Deserts of *Arabia* are wild Asses, which they call *Camphurs*, carrying a Horn in their Front, with which they used to fight against the Bulls, and which the *Indians* made use of to cure several Diseases, especially such as came by Poison; and that the *Arabs* near the *Red Sea* had another Animal among them, which those People called *Piraf-soupi*, that has two Horns, long, straight, and spiral, which the *Arabs* make use of when they are wounded, or bit by any venomous Creature.

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They let this infuse six or eight Hours in Water, which they drink to cure them. He says, that this Animal is of the Size of a Mule, which also it resembles in its Head; and that the Body is hairy like a Bear, a little inclining to a fallow Colour, and the Hoof divided or cleft like the Deer's. *Johnston* says, in his Treatise of Animals, that there are other *Unicorns*; to whom the Reader may have recourse.

However, that the Unicorn is a Beast having but one Horn, all agree; but because there are five several Kinds of Beasts which have also but one single Horn, it is some Question which of them be the true. They are, *First*, The Orix, or one-horn'd wild Goat. *Secondly*, The one horn'd Ox. *Thirdly*, The Hart with one Horn. *Fourthly*, The one-horn'd Hog. And, *Fifthly*, the one-horn'd Ass. The first is certainly but a kind of one-horn'd wild Goat, the Description of it differing not much from a Goat. It resembles a Roe, having a Beard under its Chin, of a palish white Colour, and is cloven hoofed, with one Horn growing out of the Middle of its Head. These are bred in *Egypt*, *Æthiopia*, and many other Parts of the World: some of them are as large as Oxen. Their Horns are not only strong and sharp, like the Horns of a *Rhinoceros*, but also solid, and not hollow or porous, like the Horns of Harts. This Creature is said not to value the Barking of the Dog, the Foaming of the Bear, the Bellowing of the Bull, the Cry of the Panther, or the Roaring of the Lion.

The one-horn'd Ox, Bull, or Cow, is bred in *Aonia*, of various Colours, intermix'd one with another, having a whole round Hoof, like a Horse, and but one Horn growing out of the Middle of the Forehead: It is also bred in *India*, where the whole Species eat Flesh, and are whole-hoof'd, and have only a single Horn, which grows out of the Middle of their Foreheads. Some of them are said to be as high as Camels, and their Horn four Feet long. There are also in *Æthiopia*, a kind, of a purple Colour, which have but one Horn growing out of their Heads, which turns up towards their Backs.

The Unicorn Hart is a Beast bred also in *India*, whose Feet resemble an Elephant's; the Body, a young Horse, and its Head, a Hart's; out of the Middle of which grows a Horn about three Feet long. It has a roaring Voice almost like a Bull, but much shriller.

The Unicorn Hog is so called from his Head, being like a Boar's or Hog's Head, found, as some Authors say, in the Dominions of the *Great Cham* of *Tartary*. This Species of Unicorn is somewhat less than the Elephant; they have Hair like Oxen,

C

Heads

Heads like Hogs, Feet like Elephants, a sharp and thorny Tongue, and a Horn in the midst of the Forehead, wherewith they destroy both Man and Beast. Had this Horn grown out of its Snout, it would have been a *Rhinoceros*; but as it does not, it must be taken for one of the Kinds of *Unicorns*.

The one-horn'd *Afs* is the *Indian Afs*, which equals in Bigness a Horse; all white on the Body, but purple-headed and black-eyed, having one Horn in his Forehead, near three Feet long, whose upper Part is red or black, the Middle black, and the nether Part white. In these the great People of *India* drink, adorning them with all kind of precious things, believing that those who drink in these Horns are freed from any sort of deadly Poison or Infection. This *Afs*, or *Unicorn*, exceeds all others of the Kind, both in Stature, Body, and Swiftnefs of Foot. They are so strong that no Horse can stand before them, and fight with their single Horn like Bulls.

The true *Unicorn*, if you dare believe *Ludovicus Vertomanus*, who says he saw two of them at *Meccha* in *Arabia*, which were kept within the Verge of *Mahomet's* Sepulchre, is of a Weasel Colour, with the Head like that of a Hart, the Neck not long, and the Mane growing all on one Side; the Legs slender and lean, like the Legs of a Hind; their Hoofs cloven like Goat's Feet, and the hinder Legs all hairy and shaggy on the Outside. Of all the other five the wild *Indian Afs* comes nearest to this Description; for the true *Unicorn* and he agree in these four things: *First*, That both of them have one Horn in the Middle of the Forehead. *Secondly*, That both of them are bred in *India*. *Thirdly*, In that they are both about the Bigness of a Horse. *Fourthly*, In their Celerity and solitary Life in the Mountains. But herein they differ; *First*, In that the *one horned wild Indian Afs* is whole-hoofed, and not cloven, as the *Unicorn* is. *Secondly*, That his Colour is white on the Body, and purple on the Head; whereas the *Unicorn* is of a Weasel-like Colour. *Thirdly*, That his Horns are purple, black, and white; whereas the *Unicorn's* Horn is wreathed in Spires and of an Ivory Colour. In the Year 1553, a great *Unicorn's* Horn was brought to the King of *France*, valued at twenty thousand Pounds *Sterling*. That which was presented to King *Charles* the First, of *England*, is suppos'd to be one of the greatest that was ever seen in the World; it was seven Feet long, weighed thirteen Pounds, and was in the Shape of a Wax Candle, but wreathed within itself in Spires; hollow about a Foot from its Root, growing taper by little and little towards the Point; of a polished Smoothness, and the Spires not deep,

but like the Windings of Woodbine, and the Colour not perfectly white, but somewhat obscure.

Some in *Poland* have been found five or six Feet long, being very sharp and smooth: Others in the Rivers, but less pure, outwardly blackish, and inwardly of a pure white; a third and fourth Sort of a solid hard Substance, so that one would take them to be Stone; and many other Sorts have been found in that Country. But that these, or any of the others, were true *Unicorns* Horns, none of our Authors have yet made appear; and if all the Circumstances be considered, it is much to be doubted whether any of them were the right or not; forasmuch as the Druggists or Apothecaries were never known to have or sell the true, that which is commonly sold being from five to eight Foot in Length, and more, very sharp-pointed, running taper all along, and twisted or wreathed, of the Colour of Ivory, but of a much finer Grain, and very white within. Yet this Horn is not produced by a four footed Beast, but comes from a Fish called the *Sea Unicorn*, and is brought from *Davis's* Streights near the *North Passage*.

Authors have ascribed almost incredible Things to it, the chiefest of which are, to resist all Manner of Poisons, and to cure the Plague, with all Sorts of malignant Fevers, the Biting of Serpents, mad Dogs, &c. It is chiefly used as a Cordial, for which Purpose a Jelly is made of it, together with a little Cochineal and Saffron; and the Shavings are boil'd in Broth, &c. after the Manner of Shavings of Hart's Horn.

[The only one-horn'd Land Animal in the World is the *Rhinoceros*, which therefore is the true *Unicorn*, however variously describ'd by People who either knew nothing of it but by Hearsay; or had a Mind to tell strange Stories, rather than Truth. The Horn of this Animal is what the *Indians* use, and have so much in Esteem, taking it inwardly in almost all Diseases, and making Cups of it for their Kings to drink out of, imagining that nothing drank out of them can be poisonous. It is certainly a Sudorifick, probably from the Quantity of volatile Salt it contains, and is commended in Epilepsies, &c. The *Rhinoceros* is found in *Africa*, and in the Isle of *Java*, and is describ'd by *Bontius*, under the Name of *Abada sive Rhinoceros*: The Horn is black and solid, and when full grown is about twenty Inches long, and something of the Figure of a Bull's Horn.

The thing called *Unicorn's* Horn in the Shops, is the Tooth of the *Cetus marinus*, *Narwal dictus Mont. Ex. 6. Balæna decimum sextum genus dicta Narwal Schœnes. Jct. 28.* It has long been known to belong to this Fish, and has been erroneously thought

3

*The Animal y bears y Bezoar
or y Bezoar Goat.*



4

The Musk Goat.



thought to be a Horn growing out of its Nose, but is in Reality a Tooth of prodigious Length, growing out of his left upper Jaw: It is like Ivory but more solid and heavy, and its Fibres are smaller. Its Virtues are the same with those of Ivory, Harts-horn Shavings, &c.

The Pieces of this sold in the Shops, are often fictitious, being Pieces of the Bones of the Sea-Horse and other Animals, turned into the Shape of this. The fossil Unicorn's Stone is the *Cornu fossile. Wormi.* 54. *Charlt.* 23. *Cornu fossile vulgo Monocerates cornu Boet.* 425. *Ebur fossile. Clus. Exot.* 168. It is a stony or earthy Substance something resembling Bones, hard on the Outside, softer within, and sticking to the Tongue. It is dug out of the Earth, and has the same Virtues with the *Terra Lemnia*, and other such Earths.]

3. Of the Bezoar.

Pomet. **T**HE Bezoar, which the *Indians* calls *Pozan*, is an Animal that produces in its Stomach, a Stone that is called by that Name, to which great Virtues are attributed, which made it heretofore highly valued, and sold at a great Rate, as the right and oriental Bezoar is at this Day. There is a great deal of Trouble in meeting with the natural Stone, as certain Persons have found out the Secret of counterfeiting it; beside that these Animals do not produce any considerable Quantities; and several of them none at all. Mr. *Tavernier* says concerning Bezoar, as follows:

“Bezoar comes from a Province of the Kingdom of *Golconda* lying on the North East. It is found in the Matter that is in the Maw of the Goats that browse on a Shrub, the Name of which I have forgot. This Plant bears little Buds, about which, and the Ends of the Branches which the Goats eat, the Bezoar forms itself in the Stomach of these Animals. It takes its Shape from that of the Buds and the Ends of the Branches; which is the Reason we see it of so many different Figures. The Peasants, by feeling of the Belly of the Goat, know whether there is any Bezoar there, and so sell it according to the Quantity that is therein. They rub their two Hands under the Belly, and press the Maw or Stomach along on both Sides, so that what is therein must fall into the Middle, and they can then perceive exactly by feeling, how much Bezoar there is.

“The Rarity of Bezoar is in the Size; for the small Pieces have not so much Virtue in them as the large; but in this there is oftentimes a Cheat, because there are People who powder and mix the small Pieces of Bezoar with a certain

“Paste compos'd of a Gum, and something else of the Colour of Bezoar, and form it up with its several Coats in the same Manner as we see the natural Bezoar; but we may discover this Fraud chiefly these two Ways: The first is, to weigh the Bezoar, and steep it some Time in warm Water; and if the Water does not change its Colour, or the Bezoar lose its Weight, it is true and natural. The other Way is to run a sharp Piece of red hot Iron against the Bezoar; if the Iron enter, and it fry, it is a Sign of its Mixture, and that it is not natural. The larger the Bezoar is, the dearer it is, and it rises in proportion as a Diamond: For if five or six Bezoar Stones weigh one Ounce, that Ounce will be worth from fifteen to eighteen or twenty Livres; but if it be one Stone of an Ounce weight, it will sell for a hundred Livres. I have sold one of four Ounces and a Quarter for two thousand Livres.

“There are also a great many Bezoar Stones taken from Cows, both in the East and Western Countries, and they are so large as to weigh seventeen or eighteen Ounces; of which Sort I have seen one that was presented to the Great Duke of *Tuscany*; but they have nothing near the good Qualities of the true Bezoar; six Grains of which will do more than thirty of this. As to the Bezoar that is found in Apes, it is so strong, that two Grains will perform more than six of that of the Goat; but it is very scarce: it is found particularly in the Apes to be met with in the Isle of *Madagascar*. This Sort of Bezoar is round, whereas the other is of various Forms, according as it is shaped from the Buds and Ends of the Branches which the Goats eat. As these Stones which are had from the Ape are a great deal scarcer than the other, so are they abundantly dearer, and more sought after; and when one is found of the Size of a Nut, it is sold sometimes for an Hundred Crowns. The Portuguese, above all other Nations, make great use of Bezoar, because they are always upon their Guard, or watching one another for fear of Poison.”

To this I shall add what Mr. *Du Renou* has observed of the Bezoar; who says, pag. 451. “It is a very active Animal, that skips from Rock to Rock, at his Ease, and is very fierce; so that when he is closely pursued, he sometimes kills the *Indian* Hunters. The Hoof or Claws of his Feet are divided neither more nor less than the Goats; the Legs are pretty thick; the Tail short, and turn'd up; the Body hairy as that of the He-Goat, but shorter, and of an ash Colour, inclining to red, or rather of the

“Colour of a Hind’s Belly; the Head is shaped like the Goat, and armed with two black Horns hollow in the lower Part, and turn’d backwards, and as it were lying down upon the Back, with which they make an obtuse Angle in joining.” And this Account I can affirm to be Truth, having seen two at the Marshal Vitry’s Castle. Besides what yet further confirms what the Sieur Renou has said of it is, that I have by me the four Feet, a Horn, and the Coat of the Stone of this Animal, which agree exactly with the Relation made by the Sieur Du Renou. As to the Coat of the Stone it is one of the greatest Curiosities that has been seen a long Time in France, by the Account of the most intelligent People.

It is marked in the Plate A: it is of the Size of a Goose Egg, supplied on the Outside with a rough short Hair, of a dun Colour, and being cut asunder appears to enclose a Shell, mark’d in B, that is thin and brown, which makes a Covering for another Shell, that is white, and is marked C, where this Stone is contained, to which they give the Name of *Bezoar*. This is contrary to what all Authors have wrote of it; and I should not have had the Confidence to have advanced it, if I had not had the Original in my Hands; which makes it plain, that there can never be more than one *Bezoar* Stone at a time in the Belly of this Animal, because of the Bigness. And it is likely the great Number of these Animals that have no *Bezoar* at all in them, occasions their Scarcity and Dearth.

If you would have the finest and best Oriental *Bezoar*, you must chuse that which is shining, of a pleasant Scent, tending to that of *Ambergrease*, smooth to Touch, and which rubb’d on Paper done with Cerusse, makes it become yellow. The less it is broken to Pieces, and full of Bits irregularly shap’d, the better; and take care that the false be not mix’d with the true, especially when ’tis bought in large Quantities; the more shining, large, intire, and round it be, the more it is valued. But as to the particular Figure or Colour, they are of no Consequence for its physical Use; it is all one whether it be long, round, crooked, or twisted, smooth, rough, white, yellow, or grey; but the Colour that is usually to be met with, is the Olive Colour.

Bezoar is a Preservative from pestilential Air, and a Remedy for the Small-Pox, Measles, or other contagious Diseases. It is reckoned also proper against Vertigo’s, Epilepsies, Palpitation of the Heart, Jaundice, Cholick, Dysentery, Gravel, to procure Labour-Pains, and against Poisons. Dose from four Grains to twelve. The Jews call this

Stone *Bell-Zaard*, which signifies the Master, or Overcomer of Poison.

Of Occidental Bezoar.

The occidental *Bezoar* differs from the oriental, in that it is usually much larger, being found sometimes of the Size of a small Hen’s Egg. It is likewise of diverse Colours, but most commonly of a light Grey. It is made up of several *Laminæ*, or Crusts, laid one over another like the former, but much thicker, and being broke, appears as if it had been sublimed, in that one sees in it a great many little Needles shooting like those in Salt of Lead: the Outside is soft, and very smooth, of a reddish grey Colour.

These *Bezoars* are brought from Peru, where some of the *Bezoar* Animals are found. But as they are but rarely met with in the Belly of these Animals there, that makes it that very few are brought into France. It has also a very sweet Smell, much stronger than the *Oriental Bezoar*. And because this *Bezoar* is very scarce, the Dutch and other Nations counterfeit it with a grey Paste, which they form into round Balls of what Size they please. And I have seen one of the Bigness of a Tennis-Ball, that was in the middle of a Cup, so fix’d that it could not be mov’d, to the end that it might be infus’d in the Liquor put in the Cup, in order to give a Flavour to it before they drank it.

There are also some others Things in the Shops, called sometimes *Bezoars*; as the Heart and Liver of the Viper, &c. are called *Bezoar Animal*. The Juniper-Berries, *Bezoar Vegetable*, and the Venice Treacle, Mithridates, &c. *Bezoar Compound*: The several Stones also found in the Stomachs of Hogs, Oxen, &c. are called by some *Bezoar*, but it would be better to confine the Word to the Oriental and Occidental Stones here described, and to call the others by the Names that more properly belong to them.

Bezoar is a Stone taken out of the Belly of certain Animals in the East-Indies, of which there are several Sorts. I shall here mention four that are of Use in Physick. The first Kind, or that most commonly us’d, is called, *Lapis Bezoar Orientalis*, or the *Oriental Bezoar*. It is found in Balls of different Sizes and Shapes; for some are as big as a Wallnut, others as a Nutmeg, other as a Hazel-Nut, and some as a large Pea: Some are round, others oval, flat, or bunch’d. The Superficies of all of them are smooth, polish’d, shining, of an olive or grey Colour. Their Substance, when broke, divides like *Laminæ*, or Scales, that are form’d successively by different Accessions

cessions of saline Humours, which petrify in the Belly of the Animals, after the same manner as Stones are form'd in the Channels of a Current of the Waters, which continually leave behind them certain Salts, which coagulate and form themselves into a hard Crust or Stone. This *Bezoar* is produc'd in the Belly of a wild Goat in the *East-Indies*, which they call in *Latin* *Capricerva*, because they partake of the Deer and the Goat. The Inhabitants otherwise call them *Bezoar*, from whence the Name of *Bezoar* arises.

This Animal is very nimble, so that he will skip from Rock to Rock; and is dangerous to the Hunter; for he will defend himself, and sometimes kills the *Indians* that pursue him. The Head resembles that of the He-goat. The Horns are very black, and are bending almost to his Back. The Body is cover'd with an Ash-colour'd Hair, inclining to red, much shorter than that of the Goat, and nearest to the Deer's. The Tail is short, and turns up again. The Legs are pretty thick, and the Feet are cleft like those of the Goat. Chuse your *Oriental Bezoar* in one whole Stone, that is smooth, shining, and of a pleasant Smell, inclining to *Ambergrease*. They divide into *Laminae*, or Flakes, when broken; of a grey or olive Colour. The largest are the most valued by the Curious, but it is of little Moment in Physick of what Size they are. It contains in it some small Matter of volatile Salt, that is sulphurous and oily. It is esteem'd as a great Cordial, proper to promote Sweat, and drive away malignant Humours. The Dose is from four Grains to ten or a dozen in any Cordial, or other proper Liquor.

The second *Bezoar* is call'd *Lapis Bezoar Occidentalis*, or *Occidental Bezoar*. It is a Stone usually larger than the Oriental, but is not so smooth and shining, of an ash or whitish Colour. They separate likewise into *Laminae*, but a great deal thicker than the Oriental *Bezoar*, interspersed with a great many small Points on the Inside. This has the same Virtues with the other, but much weaker, being given to half a Dram.

The third Sort is call'd, *Bezoar Porci*, five *Lapis Porcinus*, or the *Hog Stone*. It is almost of the Bigness of a *Filbert*, differently shap'd, and usually of a whitish Colour, inclining something to a greenish, but now and then of other Colours. The Outside is smooth. They find this Stone in the Gall of certain Swine in *India*, in the *Molucco's*, and several other Parts. The *Indians* call them, in their Language, *Mastica de folio*; the *Portuguese*, *Pedro de Vassar*, or *Piedra de Puerco*; and the *Dutch*, *Pedro de Porco*. It is very scarce, and much valued, so that they sell it in *Holland* for four hundred Livres, and more. This Stone is

sought after by the *Indians* with a great deal of Industry.

They use it as a great Preservative against Poison, and reckon it very proper to cure a Malady they call *Mordoxi*, which comes from an irritated Bile, which causes those that are seiz'd with it to be worse than them that have the Plague. It is likewise us'd for the Small-pox, epidemical Fevers, in hysterical Cases, and for the Stoppage of the Courses. It is pretended to excel *Oriental Bezoar*. When they use it, they let it stand infusing some Time in Wine and Water, that it may impart its Virtue; then they drink the Infusion before Meals: It has a little Bitterness, which is not unpleasant. There are those who have these Stones hung in little gilt Chains, to put into any Liquor for the Infusion. They keep them in little golden Boxes.

The fourth Sort of *Bezoar* is call'd *Bezoar Simiae*, or the *Bezoar from the Ape*. It is a Stone as big as a Hazel-Nut, round or oval, and blackish. They say it is taken from a kind of Ape that is found particularly in a certain Island of *America*. This Stone is very scarce and dear. It is esteem'd more fudorifick and proper in malignant and pestilential Cases, than all the other *Bezoars*. The Dose is from two Grains to six. The Signification of the Word *Bezoar*, according to some, is a *Counter Poison*: According to others, the Overcomer, or Master of Poisons.

[The Creature which affords us the true *Oriental Bezoar* is the *Gazella Indica*, *cornibus rectis, longissimis, nigris, prope caput tantum annulatis*. *Raii Synops. Animal.* 79. *Caper five Hircus Bezoarticus*. *Aldr. de Quad. bisul.* 755. *Capra five Hircus Bezoarticus, vel potius Pazaharticus*. *Jonsf. de Quad.* 56. It is an Animal of *Persia* and the *East Indies*, and is call'd by the *Persians*, *Paser*. The *Bezoar* Stone is found in its Stomach. The true *Oriental Bezoar* is of different Colours, but commonly of a brownish olive Colour. It has as a Nucleus always some heterogeneous Substance, round which it has gradually form'd itself in Strata, like the human Calculus. The Perfume of these Stones is adventitious, for they have naturally no Smell.

Many have judg'd the *Bezoar* we use generally fictitious; and doubtless the great Price has encouraged many to counterfeit it, and Counterfeits are often sold instead of it; but the common Reason for judging it fictitious, which is, that but one Stone is produced by one Animal, and therefore we could not be furnish'd with the Quantities we have, genuine, is a very weak one; for as there have been found by *Camillus*, in one emaciated Stag sixty Stones, why should we tie ourselves to the belief that this Species of Animal, which is more subject to breed them than any other in the World, should produce but one in each Individual? Our

Author

Author's Account of his particular Stone is not at all to be regarded, for the very Stone he describes here, has been since examined by Men of greater Penetration, and found to be no other than a Fruit of the *Palma Cuciofera* I. B. *Nux Indica minor Cordi*, in which either our Author, or some Body he had suffered to impose on him, had very artfully inclosed a *Bezoar* Stone.

The Occidental *Bezoar*, is produced by the *Maxama seu Cervus. Hern.* 324. *Caguacu-Ete Mare.* 235. *Caguacu-apara ejusdem, five mas et fœmina. Raii Syn. An.* 90. The Creature is found in *Mexico* and *Peru*, the Stone is of a looser Texture, and more brittle than the Oriental *Bezoar*, and not so smooth on the Outside, containing like it a heterogeneous *Nucleus* within. It has the Virtues of the other, but in a smaller Degree.

The German *Bezoar*, or *Ægragopilas*, *Mont. Ex.* 5. is found in the Stomach of the *Dorcas five Rupicapra. Ald.* 725. *Rupicapra, Raii Syn. Animal.* 78. This Stone is lighter than the others, and has for its *Nucleus* the Fibres, &c. of Herbs undigested by the Stomach of the Animal, on which are usually two *Strata* of a coriaceous Substance.

The *Pedro de Porco* is found in the Gall Bladder of the Porcupine. *Hystrix. R. S. An.* 206. *Jonsf. Quad.* 111. It is light and rough. The *Bezoar* Mineral is the *Terra Sicula Bezoardicum Minerale. Mont Exot.* 14. *Lapis Bezoar fossilis. De Laet.* 114. It is found in *Sicily* and other Places. There is also a chymical Preparation of Antimony of this Name. And it may be added to these different *Bezoars*, that the Stone of the human Bladder is called by some, *Bezoar Microcosmi.*]

4. Of the Musk Animal.

Pomet. THE Musk Animal comes very near to the Figure and Colour of a Hind, only it has a longer Body, according to the Skin which I have seen in the Possession of the *Sieur Nicholas Rondeau* at *Roan*. There are a great many of these Animals in the Kingdoms of *Tonquin* and *Boutan*, and in divers Parts of *Asia*.

That which we call Musk is a corrupted Blood, which is collected under the Belly of this Animal, after the Manner of an Imposthume; when it is ripe, the Beast, by Instinct, goes to rub himself against a Tree to break it. And this corrupted Blood, being dried in the Sun, acquires a strong Smell that is very disagreeable; which it ought to retain when it is pure, and has not come thro' the Hands of the *Jews* in *Holland* and other Places, or of other Persons, who sophisticate it with Earth, dried Blood, and other Contrivances.

They are much abused who are made to believe that the Musk is the Testicles of the Animal; and

that he gelds himself when he is pursued, as knowing that he is to be taken for his Testicles. This has been imagined, only because the People who put it into Bladders, cut them out in that Shape. Others would have it that the Musk is bruised Blood, which is produced over all the Body of this Animal, by beating it with Clubs; and that they afterwards wrap it up in Pieces of the Skin, which they cut and sew into the Fashion of Testicles. But since both these Originals of Musk seem very odd, I think it best to relate what *Mr. Tavernier* has written in his second Volume, *Page* 316. that the Reader may incline to which Opinion he likes best.

“ The best Sort and greatest Quantity of Musk comes from the Kingdom of *Boutan*, from whence they carry it to *Patna*, a principal City of *Bengal*, to traffick with the People of that Country. All the Musk that is sold in *Persia* comes from thence; and the Merchants who trade in Musk, had rather that you should give them yellow Amber or Coral for it, than Gold or Silver, because those are the two Things of greatest Esteem amongst them.

“ After they have slain this Creature, they cut the Bag which is under the Belly, about the Bigness of an Egg, and lies nearer to the genital Parts than the Navel; then they take the Musk out of the Bladder, which at that Time is like clotted Blood. When the Country People would adulterate it, they put the Liver and Blood chopped together instead of some of the Musk they take out. This Mixture produces in the Bladders, in two or three Years Time, certain little Animals which eat up the good Musk; so that you shall find a great deal of Damage when you come to open them. Others, when they have opened the Bladder, and taken out as much Musk as they can, so as not to be perceived, put in small Bits of Lead to render it more weighty. Merchants who buy and transport it into other Countries are more easy under this Deceit than the other, because those little Animals do not engender in it; but their Deceit is still more difficult to be discovered when they make little Purfes of the Skin of the Belly of the Animal, and sew them up so neatly with Threads of the same Skin, that they may seem to be the real Bladders, and fill these Purfes with that which they have taken out of the real Bladders, together with the fraudulent Mixture they add to it, which is a Deceit the Merchants can have no Knowledge of. If they tie up the Bladder as soon as they have cut it off, without giving Air and Time for the Perfume to lose a little of its Force by Evaporation, which it generally does whilst they draw out that which they take from it; when

“ when any one puts the Bladder to his Nose,
 “ Blood will burst forth immediately by the Force
 “ of the Perfume, which ought of Necessity to be
 “ tempered, to render it agreeable, without hurt-
 “ ing the Brain. The Perfume of this Animal,
 “ which I brought to *Paris*, was so strong, that it
 “ was impossible to endure it in the Lodging; it
 “ gave all the People the Head-ach, so that it was
 “ removed into the Out-House, where some of
 “ my Servants cut the Bladder; which however
 “ did not hinder the Skin from alw ys retaining
 “ some of the Perfume. They do not begin to
 “ find this Animal till about the 56th Degree;
 “ but in the 60th there is great Number, the
 “ Country being full of Forests. In the Months
 “ of *February* and *March*, indeed, when these
 “ Creatures have endured much Hunger in the
 “ Climate where they are, by reason of the Snows
 “ that fall in great Quantities, so as to be ten or
 “ twelve Feet deep, they come from the North,
 “ Southward to the 44th or 45th Degree, to eat
 “ the Blades of the green Rice; and it is at that
 “ Time the Country People lay Nets for them
 “ in their Passage, and kill them with their Staves
 “ and Arrows. Some People have affirmed to
 “ me that they are so lean and feeble, thro’ Hun-
 “ ger, at that Time, that they suffer themselves to
 “ be run down. There must be a prodigious
 “ Quantity of these Creatures, since each has but
 “ one Bladder; and the largest commonly being no
 “ bigger than a Hen’s Egg, which cannot furnish
 “ above half an Ounce of Musk; and sometimes
 “ there must be three or four Bladders to make
 “ one Ounce.

“ The King of *Boutan*, fearing lest the Tricks
 “ which are played with the Musk should spoil
 “ the Trade for it (since it can be had from
 “ *Tunquin* and *Cochin China*, tho’ it is dearer there
 “ because it is not taken in such large Quantities.)
 “ has some time since commanded that none of the
 “ Bladders should be sewed, but all brought open
 “ to *Boutan*, which is the Place of his Residence,
 “ there to be inspected, and sealed with his Seal.
 “ All those which I bought were of this Kind.
 “ But notwithstanding all the King’s Precautions,
 “ the People have a cunning way to open them,
 “ and put in their small Bits of Lead (as I have
 “ said) which the Merchants endure the more
 “ patiently, because it does not spoil the Musk,
 “ but only deceives them in the Weight.”

Musk is to be chosen in very dry Bladders, the
 Skin that covers it very thin, and with but little
 Hair upon it, because there are some Bladders
 where there is more of the Skin and Hair than
 the real Commodity. Let it be of a brown Co-
 lour, which is the Mark of the right *Tunquin*
 Bladder, which is much more esteemed, and better

than that of *Bengal*, which is covered with Skins
 that have white Hair upon them. When the
 Musk is separated from its Cover, that should be
 made Choice of, which is of a dark Colour; of
 a strong and unsupportable Smell; of a bitter
 Taste, and has as few hard and black Clots in it
 as is possible; and being put upon the Fire, will
 burn and be consumed. Yet this last Mark is not
 of general Use, but serves only to discover that
 which is mixed with Earth; for the Fire will
 not manifest the Falsity of that which is counter-
 feited with Blood. Others will have it, that the
 right Musk ought to have an Oiliness when pressed
 with the Fingers. But as this is a Commodity
 very difficult to be known, and the most cunning
 are often deceived in it, it has given Occasion
 to many Persons to mix it, and therefore one
 ought not to strive for a good Pennyworth, but
 to buy it of honest Merchants, and reject all the
 Sorts of Musk which *Hawkers* carry about to sell,
 both in and out of the Bladders, it being nothing
 but Dirt a little scented; to cover their Roguery.
 They pretend to sell it cheap, because they brought
 it out of the Country themselves, or that they
 have stole the Customs, which are indeed very high
 upon it; or that they are Mariners, and the Cap-
 tain has given it to them for their Wages; and
 by that Means put off their false Drugs, selling
 more for twenty Pence than an honest Merchant
 can afford for twenty Livres, and getting enough by
 it at their cheap Price too. As for that which
 is mixed with Earth, it is easy to know it; because
 if a little be put upon lighted Charcoal, if there
 is any Earth it will remain; but, on the contrary,
 if it be mixed with the Blood and Liver of the
 Beast, there will remain only a little whitish or
 grey Dust; this however is to be rejected, as ought
 also that which is of a pleasant Smell, because it
 does not get that agreeable Scent, but by the Ad-
 dition of some Drugs that open the Parts of it.

The Use of Musk is not very frequent in Phy-
 sick, because it is very improper for Women; but
 it is much used by the Perfumers; and if the De-
 mand for it be not so great as formerly, it is be-
 cause Perfumes are not so much in Use as they
 have been heretofore.

Moschus, or *Musk*, is a Kind of bilious
 Blood, fermented, coagulated, and almost *Lemery*.
 corrupted, which is taken from a thick
 Bladder, or Pouch, as big as a Hen’s Egg, which
 is found under the Belly towards the genital Parts
 of a wild four-footed Animal, called *Moschus*,
Moschius, *Dorcas Moschi*, *Capriolus Moschis*, and
Gazella Indica. They say it is of the Shape and
 Colour of a Hind; is produced in the Kingdoms
 of *Boutan*, *Tunquin*, and several other Parts of

Asia.

Asia. It frequents the Woods and Forests where they hunt it; and when they have killed it, they cut out the Bladder, or Cod, which is under the Belly; then they separate the coagulated Blood, which they dry in the Sun, and reduce to a Kind of light Substance, almost powder'd, of a dark reddish Colour. This acquires a strong disagreeable Smell. They then wrap it up in Bladders for Transportation. And this is the Musk we use.

There are a prodigious Number of Animals that yield Musk, chiefly in the Kingdom of *Boutan*. They catch them usually at Spring-Time, or in the Beginning of Summer: For after they have been almost starved, during the Winter, because of the Snows that fall in those Countries, ten or twelve Feet deep, they come to seek for Food; their Blood being then in a great Heat, and violent Fermentation. The Musk they then get is likewise strong and spirituous, which is the Reason they do not expose it for some Time to dry in the Air, lest it should quite destroy the Smell. They cannot take a great deal of Musk from any one of these Animals, because they have but one Cod a-piece, which does not yield above three Drachms of Musk dried. Others say, that the Bag, during the Rutting of this Creature, has an Abscess formed in it; which when fully ripe makes the Beast itch and rub himself against Stones, Rocks, and Stumps of Trees, 'till he breaks it; and it is this Corruption that, when it is spilt and dried in the Sun, becomes Musk.

There is no Impossibility in this Story; but yet it is not to be thought, as most of the Naturalists, both ancient and modern, have done, that all the Musk we have is taken from these Abscesses. For is it likely that they can follow the Track of the wild Beasts, through the Woods and Forests, to gather up this Matter which they have thrown sometimes into Places inaccessible, into Mire or Sands? If we had no other Musk but that, it would be much scarcer and dearer than it is; besides, a dried Abscess would be of another Colour than Musk, for it would be of a light grey.

When you buy Musk in the Bag, you should chuse that which is dry; let the Bag be thin, and little Hair upon it; for the more Hair and Skin there is, there will be the less of the Musk. Let the Hair be of a brown Colour, for that is the Mark of *Tunquin* Musk, which is most esteemed. The Musk of *Bengal* is wrapt up in Bags, with white Hair upon them.

When the Musk is separated from the Bag, it must be kept in a leaden Box, that the Coolness of the Metal may hinder it from growing too dry, and losing its most volatile Parts. That Musk is to be made choice of that is sufficiently dry, of a reddish Colour, strong Scent, and

a bitter Taste. It is almost all Sulphur, or Oil, and volatile Salt. It has very little Earth in it. The Scent is nauseous and disagreeable when you smell to a great deal of it at a Time, but sweet and pleasant when some few Grains are mixt with a Quantity of other Ingredients. The Reason of the Difference is this; when it is in a larger Quantity, the Parts evaporate so much, that they oppress and tire the olfactory Nerve; whereas, on the contrary, when there are but a few volatile Particles, they only affect it with an agreeable Titillation. Musk has been used much more amongst the Perfumers and Confectioners, than it is at present. People are afraid of it now, because it raises the Vapours, especially in Women.

It fortifies the Heart and Brain, refreshes the decayed Spirits; it resists Poison, dissolves and rarifies gross Humours, increases Seed, and expels Wind. The Dose is from half a Grain to four Grains. It is good for Deafness, being put into the Ear, with a little Cotton. They apply it to the Womb, to allay the Vapours in hysterical Fits, upon the rising of the Womb, called the Mother.

[The Animal which produces the Musk is the *Capra Mosel*, aliis *Cervus odoratus*. *Chart. Exer.* 10. *Capra Moschus*. *Aldr.* 743. *Animal Moschiferum Raii Synop. An.* 127. It is common in the Northern Part of the *Mogul's* Country, and is not properly either of the Goat or Stag kind, tho' something like both.

The Musk is an excrementitious Blood, which has undergone several Alterations in its Follicle, and is either taken out by Incision, or rubbed out by the Animal, or cut from its Body, with the Bag. The *Arabians* use it as a great Cordial, but it has been very little used with us, because found hurtful to Persons of both Sexes subject to the Vapours. Of late, however, great Cures have been performed by large Doses of it; a Scruple at a Time, given in some spirituous Vehicle, as Arrack, or strong Cinnamon Water.

Cotton impregnated with it, is found admirable in that Kind of Deafness, which is owing to a too great Thickness, and Viscidity of the Fluids.]

Of the Civet-Cat.

THE *Civet* is a thick unctuous Liquor, *Pomet.* found in a Pouch which is under the Tail, and near the *Anus* of a Beast like a *Spanish Cat*, but much more fierce, and very voracious. This Animal has from hence the Name of the *Civet-Cat*, and is very common in *China*, the *East* and *West-Indies*, and likewise in *Holland*.

Authors differ extremely concerning the Nature of this Animal, and that which we take from it. But as it is not my Purpose to repeat what they have written, I shall only relate what I myself have

have practised upon a *Civet-Cat* that I kept alive a Year together, whose Figure I have given you. It was brought from *China* by a Person in the Retinue of the Ambassador of *Siam*, who gave it to one of my Friends, who made a Present of it to me in the Year 1688. Having kept this Creature some Days, I perceived that the Wall and Bars that enclosed it were continually covered with an unctuous Moisture, thick, and very brown, of a very strong and disagreeable Smell: Notwithstanding that during all the Time I kept this Animal, I took Care to have the Civet gathered every other Day, not without some Trouble and Hazard, because it put the Creature to some Pain or Apprehension of it; and having done so for some Months, I had about the Quantity of an Ounce and a half; but it is certain, that if the necessary Care had been taken, and the Beast could be hindered from rubbing itself, I might have got a great deal more; but I neglected it, because the Colour of the Drug did not please those I shewed it to, though it was well scented, and as good at least as that which is brought from *Holland*.

There is no Reason, therefore, to think that the Civet is the Dung or Sweat of this Animal, as some have believed, who have also told us, that the Animal affords no Civet till it has been well beaten; and that the more it is enraged, the more Civet it lets down under its Belly, and between its Thighs; which is contrary to the Truth, as may be remarked from what I said before. And as to the white Colour of that which comes from *Holland*, the Reason of it is, the *Dutch*, who make a great Trade of *Civet*, feed their *Cats* with Milk and Eggs.

Besides the *Civet* from *Holland*, there comes some from *Brazil* which is brown, agreeable both in Smell and Colour to that I gathered from my Animal; they give this the Name of *Guinea* or *Brazil Civet*.

There is a third called *Occidental Civet*, of which, because it is so common, and has no Relation to this Chapter, I shall say nothing; and therefore remit the Reader to the several Authors that have treated of it, it being no other than human Dung.

Civet is to be chose new, and of a good Consistence, that is, that it be neither too hard nor too soft, of a white Colour, of a strong Smell, and very disagreeable. This Commodity is as difficult to be known as Musk. It is for this Reason the *Hollanders* put little printed Certificates upon their Pots of *Civet*, to give it the Credit of being pure and not falsified; and that it is such as it came out of the Pouches of the *Civet-Cats*; but the best Way is to buy it of

honest Merchants, without relying upon the printed Papers, or the Colour, since it may be of a golden Colour, and yet be good; for if it be kept a little Time, though the Pots be never opened, the Top, how white soever it were before, will become yellow, and of a gold Colour, and as it grows old will be still the browner.

Many Persons affirm, that if a Paper is rubbed with *Civet*, and one can write upon it, it is an infallible Mark that it is natural, which I found to be false, having tried it several times. But, besides the Care that must be taken to have it from honest People, one must look whether in keeping it does not grow musty and decayed; because that which is mixed will grow mouldy, both at Top and Bottom, especially where there is any vacant Space, and will have a rank Scent, and very disagreeable. When this happens to People who have falsified it, and it becomes unfit for Sale, as well for its ill Colour as its Smell, which is different from the right *Civet*, they colour it with some Drugs, and so pass it off under the Name of *Guinea Civet*, which will easily be found out by its reddish Colour, which they commonly give it. Never trust therefore to the *Dutch* or *French* Prints they put upon it, which serve only to cover their Knavery, and to get twenty or two and twenty Livres an Ounce for that Commodity, which does not stand them in perhaps forty Pence.

Civet is of some Use in Physick, but is most in Request with the Confectioners and Perfumers. It serves to perfume and give a Scent to other Ingredients. This Drug is to be used with a great deal of Discretion; for if one exceeds, though never so little, the just Quantity that should be used, instead of a pleasant Smell, it renders one that is very disagreeable.

Zibethum, Zibetha, Civeta, Zepetium; in *English*, *Civet*, is a liquid Matter, or Lemery. congealed Liquor, unctuous, of a Scent that is very strong and unpleasant. The Beast from whence it is taken is called in *Latin*, *Hyæna, Catus Zibethicus, Felis odoratus*, in *English* the *Civet-Cat*. It is a Creature much bigger than a Cat, and less than a Badger, having something in it that resembles a Fox; the Face is sharp like a Martin, with a black Nose; its Ears short and round; its Eyes blue; the Leg and Foot black, more broad and open than a Cat's, but the Claws not so crooked, nor hid in the Feet, but its Teeth are more terrible; it has Spots all over the Body; the Hair of the Legs and Feet is very fine and soft, but in other Parts harsh, and standing upright. It is a neat and cleanly Beast, and therefore the Place it is kept in must be washed

every Day. Merchants buy the young ones, and breed them tame, feeding them with Bran, Rice-Milk, hard Eggs, Bread, Flesh, &c. so that a Cat that is large and gentle, may come to be valued at between four and eight Pound Sterling.

The best *Civet* is said to be made in *England*; but great Quantity is sent from *Holland*, with printed Certificates into all Parts of *Europe*. The best is of a clear, fine, lively whitish Colour. The *West-Indian*, *Barbadian*, and *African Civets* are next in Goodness; but the blackest is the worst, which generally comes from the *East-Indies*.

It is a valuable Commodity, so that an Ounce, when pure, has been valued at forty Shillings. It is often adulterated with Ox-Gall, Storax and Honey. It is much to be preferred to Musk, because the Scent is finer. It is of a subtile and clear Nature, and contains a great deal of Oil and volatile Salt. It comforts the Spirits, and is good against all Diseases of the Head, Brain, and Womb. The following Mixture is good to perfume Cordial Waters and Powders for the fore-mentioned Intentions. Take one Ounce of *Civet*, Musk in fine Powder, six Drains; Ambergrease two. *Civet*, put up in a Pessary, or Piece of Spunge, prevails against hysterical Fits and Vapours; put into the Ears with a little Cotton, it helps the Difficulty of Hearing. If that Mixture be ground with an equal Quantity of the Yolk of an Egg, it so opens its Body, as to make it mix exquisitely with an aqueous Substance; also with twelve or sixteen Ounces of Spirit of Wine, you may draw a most admirable Tincture for the aforesaid Purposes; and being anointed upon the Glans, just before Coition, it is said to cause Impregnation, and cure Barreness. *Civet* is anodyne and good for the Colick in Infants, if applied to the Navel.

[The Creature which produces the *Civet*, is the *Catus Zibethicus* Pit. Mem. 98. *Animal Zibethicum* Raii Syn. An. 178. *Zibethicum Animal Americanum* Rech. in Hern. *Hyæna Veterum* Bellon. Obs. Ed. Clus. 94.

The *Civet* is an excrementitious Substance, naturally separated and collected in Bags of a glandulous Substance, both in the male and female Animals; the Bag in the Male is placed between the *Penis* and Testicles, and in the Female between the *Uterus* and *Anus*.

Its external Use in hysterical Cases, which was once very common, is found to be not only useless but hurtful, and therefore wholly laid aside at present.]

6. Of the Castor, or Beaver.

Pemet. THE *Castor*, or *Beaver*, called by the *Latins*, *Castor* or *Fiber*, is a

four-footed Animal, ranged by Naturalists amongst the amphibious Creatures that live equally on the Land and in the Water. At Land it feeds upon divers Fruits, Leaves, and Barks of Trees, and especially of the Willow-Tree; and in great Rivers upon Shell-Fish, and such other Prey as it can catch. This Variety of Food is the Reason why its hinder Parts to the Ribs have the Taste of Fish, and they are eaten as such upon Fasting Days; and all the rest has the Taste of Flesh, so that it is not used but at other Times.

The *Beaver* has a Head almost like that of the Mountain Rat, but bigger, and proportionable to the Bulk of his Body, which is thick and gross, about the Size of a Pig of six Months old: They have pretty large Teeth; the under standing out beyond their Lips three Fingers Breadth; the upper about half a Finger, being very broad, crooked, strong, and sharp, growing double, very deep in their Mouths, bending circularly, and of a yellowish Red. They take Fishes upon them as if they were Hooks, and will gnaw asunder Trees as thick as a Man's Thigh, and are able to break in Pieces the hardest Bones; wherever the *Beaver* bites he never loses his Hold till his Teeth meet together. The Bristles about their Mouths are as hard as Horn; their Bones are solid; the fore Feet are like a Dog's, and their hinder like a Swan's. Their Tail is covered over with Scales, being like a Soal, about six Inches broad, and ten Inches long, which they use as a Rudder to steer with, when they swim to catch Fish. And tho' their Teeth are so terrible, yet when Men have seized them by the Tail they can govern them as they please. The *Beaver* of *Dantzick* has Hair upon four or five Inches of the Tail, and the rest of it is scaly. The whole Skin of the *Beaver* is covered with two Kinds of Hair, both very soft, but the one much longer than the other; the shortest is a kind of fine Down, and is what is used in making Hats.

The *Beavers* make themselves Houses of square Timber, which they gnaw down with their Teeth, almost as even as if it were sawed, and almost as equal as if it were measured. They lay these Pieces a-crofs, and each is let down by large Notches into the other; so that having dug a Hole for their Foundation, they build several Stories, that they may go higher or lower, according to the Rise or Fall of the Water.

I shall not dispute the Existence of those little Testicles, furnished with all the Vessels necessary for Generation, which the Royal Academy have discovered some Years ago in the Thighs, and near the Groin of a *Beaver* which they dissected.

But

7
The Elk

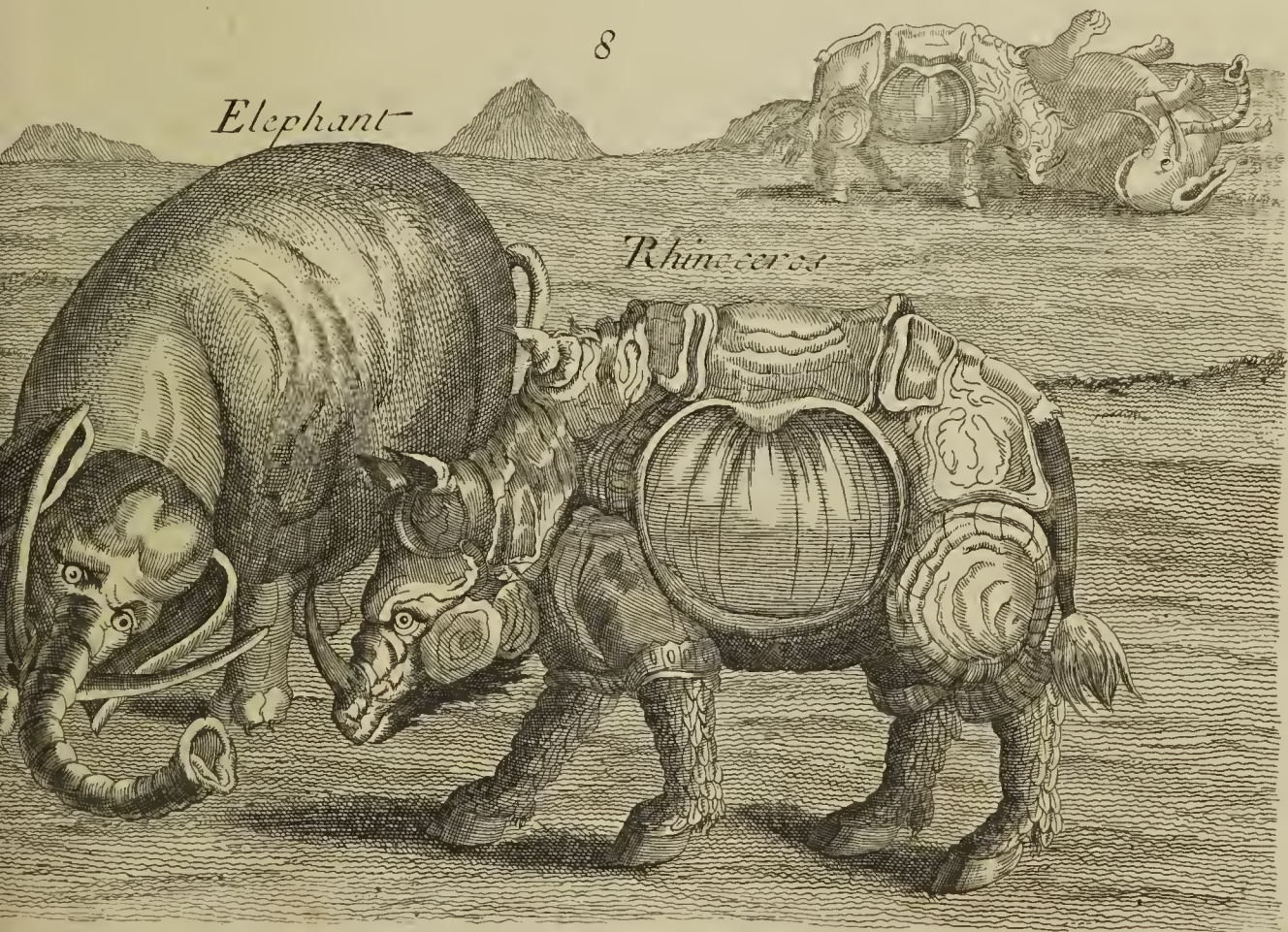


The Elk falling down in an Epileptick fit being pursu'd by 2 Huntsmen.

8

Elephant

Rhinoceros



But having never seen these little Testicles placed in the Rank of Drugs, nor any Things sold for *Castoreum*, but that Part of the Animal which the Ancients called *Fibri Testes*, without troubling myself whether these are true Testicles or no, since this Treatise is not about Generation, it will be sufficient for me to give a just and exact Description of those Parts of the Animal, which we sell under the name of *Castoreum*, and which will be the more necessary, as I know no Part of an Animal more commonly sophisticated.

That which we call *Castoreum*, is a fleshy Substance, contained at the Bottom of two pretty large Pouches, equal, distinct, placed Side-ways, one by the other, and wrapt in one common Bag, fixed below the Fundament of the Animal, between the two Thighs, and covered by the common Skin that encloses the whole Belly, and there outwardly representing two Testicles, like those of a Boar; which though they lie within, yet may be distinguished through the Skin, and taken in the Hand, although they do not hang down as the Testicles of other Creatures. Having opened the hairy Skin, you meet with the common Pouch, and in that the two others distinct from one another, which contain the Matter which we call *Castor*.

The Custom is to tie these two Pouches as they are found, and hang them in a Chimney till they are well dried, and the Matter contained in them be grown hard, and the outward Pouch has contracted a brown Colour.

After this, when these internal Pouches are opened, there is found in the lower Part of them a Matter fleshy, solid, and pulveriseable, of a Colour like Cinamon, intermixed with very thin Fibres and Membranes, and of a Scent that is extremely strong. There is likewise found in each of these lesser Pouches, a little above the fleshy Matter, another Pouch, distinct, but much less, and fastened to that which encloses it; it contains an oily Moisture, of a Scent as strong as the former. This being new is like the best Honey before it is coagulated, but becomes of the Colour and Substance of Suet as it grows old.

These are the true Marks of the *Castor* that is sold, to be used in Treacle, Mithridate, and divers other cephalick and hysterical Compositions; and these I can avouch to be true, having bought and sold a great deal, and knowing that no Person of Understanding will contradict me. But I can also speak with the more Certainty upon what Mr. Charas, who dwelt near the *Rhofne*, and those Places where these Animals are taken, has assured me; namely, that he bought of a Peasant's Daughter the Pouches of a *Beaver*, just taken

from the Body, which he hung up in the Chimney, being then of the Colour of Flesh, and appearing like Testicles, which Shape they retained when dried; that they then weighed fourteen Ounces; and being cut open, had all the inward Parts, as I have described them: That he afterwards got a live *Beaver* from the same Place, which a Countryman brought him in a Tub, which was in all Things conformable to the Description I have given; and especially as to the Pouches, which were situated in the same Place as those of a Boar, and were of so large a Size, that they were more than an Handful. The *Beavers* being of different Sizes, their Pouches are proportionable; so that when they are dried, we have them from four to sixteen Ounces.

These Animals generally inhabit Caverns in the Banks of large Rivers, among others the *Rhofne*, the *Lifere*, the *Oise*, in *France*; they are also found in *Spain*, *Savoy*, and *Italy*. But the greatest Quantity are taken along the *Elbe*, and the great Rivers of *Germany* and *Poland*; as likewise in *Lithuania* and *Muscovy*, the Lakes of *Canada*, and *Hudson's Bay* in *America*; but it is almost a general Rule, that the Fur is finer, longer, and softer, according to the Coldness of the Region they are bred in.

The Dearthness of *Castor*, and the Avarice of wicked Persons, have induced People to counterfeit it, which they do by mixing the Powder of the true *Castor* with Gums that there is no Necessity of naming, and putting them in the Skins which have contained the Testicles of Lambs and Goats; then they hang them in the Chimney, and when they are dry and hard, pass them off for true *Castor*. But it is easy to discover the Cheat, by cutting the Pouches, and looking for the Marks I have given you; of which the most essential is, that you will find none of Fibres and small Skins intermixed in them. And whereas the true *Castor*, when pounded, will pass through a Silk Sieve, and leave several little Membranes upon the Silk; the Gums will not pass, but remain clotted, without any Appearance of the little Skins before-mentioned.

I shall pass over that which several considerable Authors have reported of the *Beaver*, that being pursued by the Hunters, he bites off his own Testicles, and leaves them for his Ransom; seeing he can no more bend his Body, so as to come at them with his Teeth, than a Boar can do; and besides, being always near great Rivers, it is easy for him to escape by plunging into the Water.

Castor, diversly prepared, is recommended in Diseases of the Brain and Womb, both inwardly and outwardly. The oily Substance is likewise

used in Ointment, and in the Composition of Oil of *Castor*.

There was a *Beaver* dissected in the Academy of Sciences, which was three Foot and an half long from its Nose to the Extremity of its Tail. His greatest Breadth was twelve Inches, and he weighed above thirty Pounds. His Colour was brown, and very shining, inclining to a dark Grey. His longest Hair was an Inch an half long, and fine like the Hair of one's Head; the shorter was an Inch, and as soft as the finest Down; his Ears were round and very short, without Hair within, and outwardly like Velvet. He had four cutting Teeth, such as Squirrels and Rats, and other Creatures have that are used to gnaw Things. These Teeth below were above an Inch long; and the upper ones, which come something forward, were not directly opposite, but so disposed as to work in the Nature of Sheers, passing one by another, being very sharp at the End, and cutting like an Ax; their Colour was white without, and of a bright Red within, inclining to a bastard Saffron Colour. It had sixteen Grinders, eight of a Side. The Claws behind were joined by a Web, like those of a Goose; but those before were without such Membranes, not unlike the Mountain Rat, and they use them for Hands, as Squirrels do. Their Nails are cut sloping, and hollowed like a Pen to write with. The Tail has more of the Nature of Fish than of a terrestrial Animal, and tastes like it. The Tail is covered with Scales of the Thickness of Parchment, about a small Straw's Breadth, of an irregular hexagonal Figure, which form an *Epidermis*, or Skin that joins them together. It was eleven Inches long, and of an oval Figure, four Inches broad at the Root, and five in the Middle. This helps him in swimming, and to bear his Mortar that he makes use of in building his House, which he has sometimes of two or three Stories. His Testicles were not fastened to the Back-bone, as *Matthiolus*, *Amatus*, *Lusitanus*, and *Rondelet* have told us, but they are hid in the Sides of the *Os Pubis*, about the Groin, and do not appear without, any more than the Penis, nor can they be cut out without killing the Creature. It had four large Pouches, situated at the lower Part of the *Os Pubis*: The two first were of the Figure of a Pear, and had a Communication with one another; they had an inward Covering, which was fleshy, of an ash Colour, streaked with a great many white Lines, which had several Folds, like those of the outer Skin of a Ram's Scrotum, and were two Inches long; there was found in them a greyish Matter, of a fetid Scent, and very thick; and this is the *Castoreum* so much spoken of,

Chuse the *Castor*, or *Castoreum*, of *Dantzick*; it being heavier and of a stronger Scent, is preferable to that of *Canada*, which is generally dry, not clean, and has very little Smell. Let the Pouches be weighty and fleshy; and see that they be not filled with Honey, or any other Counterfeit, which is easily distinguishable; as those which are so filled up, are bloated, smooth, shining, and, if pressed a little, send forth a liquid and stinking Matter, of the Consistence of Honey; whereas the others, on the contrary, are hard and weighty, and when they are cut, full of little Strings, and have a Smell that is strong and piercing.

The Skin of the *Castor* is esteemed the finest and softest Fur in the World, and is a valuable Commodity for making *Beaver* Hats. In *Poland* they line all Sorts of Garments with it, as making the best Shew, and enduring the longest of any Fur. The Hair should be long, soft and silky; and that of the fat *Castor* is preferable to the lean. The Skin being burnt to Ashes, the Powder applied to the Nose, stops Bleeding.

The Fat of the *Beaver* is used as an Ointment against the Palsy, Convulsions, Hysterical Fits, Apoplexy, and Falling-Sickness. Take half a Pound of *Beaver's* Fat, Oils of Rosemary, Nutmegs, Amber, and Mace, of each one Dram.

The general Virtues of *Castor* are in strengthening the Head and Nerves, being prevalent against the Biting of Serpents and mad Dogs. It helps Forgetfulness caused by Sickness, cures Convulsions, Pains and Noise in the Ears from cold Humours, Coughs, Catarrhs, and Distillation of Rheum, provokes the Terms, causes a speedy and easy Delivery to a Woman in Travail, bringing away both Birth, and After-birth, or the dead Child if that be the Case. It has also been found effectual in Epilepsy, Apoplexy, Fits of the Mother, Gripings of the Belly, and Colick. It is prepared several Ways; but a good compound Powder may be prepared with it as follows: Take pure Castor in fine Powder, two Ounces; Saffron, Pepper, Bay-berries, Tartar vitriolated, Camphire, of each one Dram; mix them. The Dose is from one Dram to four Scruples, in any proper Vehicle.

The *Castor*, or *Beaver*, is a four-footed Animal, amphibious, for it can live by *Lemery*. Land or Water. It is about the Bigness of a Pig of six Months old: Its Head is of the Shape of a Mountain Rat: Its Teeth are large, strong, sharp, and cutting: Its Body short and hairy: Its Skin is covered with a very soft Hair, of which they make Hats: Its Tail is about a Foot long, an Inch thick, four Fingers broad, without Hair, scaly, grey, hollow towards the Roots,

Root, strengthened by Joints running into one another: Its Legs are short, those before resembling a Dog's, and the hinder one's a Swan's: It feeds upon Fruit, Leaves, and Bark of Trees; and upon Fish when it is in the Water. It is half Flesh, and half Fish. The Tail and hinder Legs are sweet like the Tuny, having a solid Fat. Some of the Tails weigh four Pounds, and are accounted a great Dainty both boiled and roasted.

If you would take hold of a *Beaver*, you must seize on his Tail, and so secure him, that he cannot turn to bite you; and by the Hold you have of his Tail you may govern him as you please.

Amongst the *Beavers* some are accounted Masters, some Servants. They generate in the Beginning of Summer, and bring forth in the End of Autumn. They are cleanly in their Houses; for the making of which, they draw the Timber on the Belly of their Antients, they lying on their Backs. They love their Young. They use their fore Feet like Hands. And their Cry is like that of an Infant. Their Testicles are placed at the lower Part of the Belly, between the Thighs, near the Fundament, but they lie within, under a fleshy Skin, which is hairy, and covers all the Belly; however they may be distinguished outwardly, and handled. When they would have these Testicles, they open the fleshy hairy Skin, under which they find the first common Purse, which contains the two others in the Shape of little Purses, or the real Testicles of an Animal; then they tie them by the Neck, and hang them in the Chimney, leaving them till they be dry and hardened, and the outward Purse is of a brownish Colour, and this is what they call *Castor*. If you then open these inward Purses, you will find a Matter which is hard, brittle, of a yellowish Brown, intermixed with many loose Membranes of a strong and piercing Odour; and there is another Pouch which encloses an unctuous and fattish Liquor, very like Honey, which as it grows old, comes to the Colour and Consistence of Suet, and is of as strong a Scent as the Parts that are more solid.

Some of these Purses are larger, some less, according to the Beast they are taken from. They are best cured by taking them out, cleansing them purely, and drying them well in some shady Place; which when it is well done, they will keep seven Years. It is adulterated by Gum *Ammoniacum*, Blood, and Powder of Kidneys, &c. as also whole Kidneys put up into little Bladders; but may be discovered by being black, mouldy, and not apt to crumble; whereas the genuine is of a fetid, strong, and unpleasant Smell, and of a strong, sharp, biting, and bitter Taste, and of a brittle Substance.

The *Castor* contains a great deal of exalted Oil and volatile Salt; it attenuates viscous Humours, strengthens the Brain, provokes the Terms in Women, allays Vapours, resists Putrefaction, causes Perspiration; is proper for Epilepsy, Palsy, or Apoplexy, and is a good Medicine for Deafness.

The unctuous Liquor which is found annexed to the Testicles of the *Beaver* has the same Virtue, and is strengthening to the Nerves.

[The Creature from which we have the *Castor* of the Shops, is the *Castor*. *Aldrov. de Quad. dig. 276. Castor five Fiber, Raii Syn. Anim. 209.* It is found both in the *East* and *West-Indies*, and in many other Parts of the World, as *Poland*, *Russia*, &c.

The *Castor* we use is the inguinal Glands of this Animal, taken both from the Males and Females, which are of different Bignesses in different *Beavers*, and are situated in the Groin, under the Testicles, covered with a thick Membrane, and filled with an oleaginous Liquor, which in Time hardens into a pulverisable Substance.

The *Russia Castor* is greatly preferable to that of any other Country, and the Creature from which it is taken, though of the *Beaver* kind, is very different from the common *Beaver* of *Europe* and *America*.

It is an admirable Medicine in all hysterical Cases. The Dose is from three Grains to ten in Powder, and from thirty to fifty Drops in Tincture.]

7. Of the Elk.

THE *Elk* is a wild Creature that is *Pomet.* commonly met with in cold Countries, especially in *Sweden*, *Norway*, *Canada*, and other Parts. This Animal is about the Height of a Coach-horse, or a large Ox; the Head is very thick, the Eyes are bright and sparkling; the Horns are spreading and large, like those of the Deer; the Legs long and slender; the Feet black, and divided at the Hoof, as those of the Ox or Cow; as to the Hair, it is soft, and of a blackish Yellow. I shall not stand to relate what abundance of Authors have said concerning this Animal: But shall only observe, that the Name *Eland*, or *Elan*, given by the *Germans*, signifies Misery; as well because that this Animal lives nowhere else but in desolate Places, as Woods, Forests, and the like, as because he is very subject to the Falling-Sickness; and as soon as he is attacked with this Disease, he fails not to put his left Foot to his left Ear, to cure himself thereof; which has given Occasion to the Antients to believe

believe that the *Elk's* Claw, or the Covering upon the left Foot, was a Specifick for the Epilepsy.

Of all the Parts of this Animal, there is none used in Medicine but the left hind Foot, which is called *Ungula Alcis* in the Shops; the Buyer must take care, that what is offered to Sale be not the Foot of some other like Animal, which it is difficult enough to distinguish, and that the Leg or the Skin be with the Foot, to see by the Hair whether it be the left hind Foot. You ought to take care likewise, that it be not worm-eaten, which often happens when they are old; but on the contrary, let the Claw be heavy, black, shining, and very smooth. It is of some Use amongst the Apothecaries, being an Ingredient in many Compositions for the Diseases before-mentioned.

Some People eat the Flesh as Venison. The Skins are dressed by Tanners, with Fish-Oil and Alum, to make Breast-Plates of, and to shelter from Rain. They may be known from a Deer or Hart's Skin, by blowing through them; for the Breath will come through, as in Buff. The Nerves are used against the Cramp, by binding the affected Part with them. The Horns are said to be anti-epileptick; but the chief Virtue is said to lie in the Hoof, being taken inwardly in Powder, or worn in a Ring, or hung about the Neck, so as it may touch the Skin, or taken, being rasped or filed like Harts-Horn.

Alce, five *Alces*, or the *Elk*, is a four-footed wild Beast of a large Size, betwixt a Deer, an Ass, and a Goat, having great branched Horns, bending toward the Back on the plain Edge, the Teeth or Branches of them being upwards, solid at the Root, and round like a Hart's Horn, but much broader. They grow as it were out of their Eye-lids, are very heavy, weighing at least twelve Pounds, and are about two Feet long, which Horns they lose every Year. It is headed something like a Horse, has long Ears, a broad Forehead, and an upper Lip so great, that hanging over the nether, it so much falls over, that it cannot eat for it but by going backwards. It is a long-backed Beast, with a short, or almost no Tail, and a cloven Hoof like the Hart; his Hair is almost of the same Colour, and sometimes of a brown Rustlet. He has a strange kind of Mane, lying both on the Top of his Neck, and underneath his Throat, where it sticks out like a Beard, or curled Lock of Hair.

This is a melancholy Beast, and frequently afflicted with the Falling-Sickness, continuing in the Pangs thereof till the Hoof of the left Foot touch the left Ear; wherewith rubbing the Part, the Creature is thereupon immediately delivered. In the Northern Climes they live in Herds, and are

taken by Hunting; for upon the slightest Wound, they are so timorous a Creature, they immediately fall down, and yield themselves a Prey to their Enemies. In *Sweden*, *Livonia*, &c. they are taken, tamed, and used for Beasts of Burden; for they are both swift and strong, and serve well to draw in Sledges upon the Ice and Snow, in *Russia*, *Scandinavia*, and other Northern Parts.

[The *Ungula Alcis* is the Hoof of the *Alce*, *Raii Syn. An* 86. *Gesn. de Quad.* 1. *Aldrov. de Quad. Bisulc.* 886. The Creature is of the Stag kind, and there are generally Numbers of them seen together. The Hoof is good in the Epilepsy, as it contains a volatile Salt like that of the Horns, &c. of other Animals.

The Story of its curing itself of a convulsive Distemper by the Touch of its left hinder Hoof is an idle Tale; and for medicinal Use the Right Hoof is therefore altogether as good as the Left, and those of the fore Feet as those of the Hinder.]

8. Of the Elephant and Rhinoceros.

THE *Elephant* is an Animal that in Height and Thickness exceeds all the *Pomet.* Beasts of the Earth. It is a very understanding and tractable Creature, and is armed with a long, fleshy, and nervous Trunk, which serves instead of an Arm or Hand upon many Occasions. It has likewise the Discretion to extend and bend its Body so as to go through a Gate many Feet lower than its Body, provided it be wide enough for its Bulk. I do not believe it will be necessary to give a very particular Description of this Animal, because there is scarce any considerable Town in *Europe*, but where this Creature has been seen; only it may not be amiss to inform you, that the *Elephants* come from the Eastern Parts of the World, but more particularly from the Great *Mogul's* Country. They are the Males only that are armed with great Teeth, or Tusks, at the upper Part of the lower Jaws, for the Females have none such; these are called Ivory, of which several fine Works are made; as well as Medicines and other necessary Things for Life.

I shall not trouble myself to give an Account of all that has been writ by the Antients; but only take notice of some few Things that may be entertaining to the Reader, if they afford him no other Instruction. *Ambrose Parey* gives an Account of two sorts of Dragons which destroy the *Elephants* after this manner: These Dragons wind themselves about the Legs of the *Elephants*, and then thrusting their Heads up their Nostrils, they put out their Eyes, sting them, and suck their Blood till they are dead.

Pliny

Pliny affirms he saw an *Elephant* which learned the *Greek* Letters, and was able with his Tongue to write a *Greek* Sentence; and in the Plays of *Germanicus Cæsar*, *Elephants* danced after Instruments of Musick, keeping Time and Measure. The *Elephant* is said to have a kind of Religion; for it worships, reverences, or observes the Course of the Sun, Moon, and Stars: For when the Moon shines, they go to the Waters where they may see her; and when the Sun rises, they salute or reverence his appearing, by holding up their Trunk to Heaven in Congratulation for the Light. By a kind of natural Instinct they have some Foreknowledge of their own Death; and when any of their Kind dies, they cover the dead Carcase with Dust, Earth, and green Boughs. They have a passionate Love to their Masters and Keepers, and seldom forget to revenge an Injury on those that have offended them; as they are always grateful to their Benefactors. *Aynou* saith, an *Elephant* was cheated of the half of his daily Allowance by his Overseer; by chance the Master came and served him, upon which the Beast divided it into two Parts before his Master, laying one of them aside: By this the Fraud of the Servant was detected.

Pliny says, that an *Elephant* which was duller than ordinary, was found by his Master in the Night practising Things, which he had taught him in the Day with much Difficulty, and many Blows. It is reported they will live two or three hundred Years, if not prevented by extraordinary Accidents. They only breed in hot Countries, and scarcely can bear Cold and Winter Weather. As to their Teeth, they are often found very large. An *Elephant's* Tooth was sold to a *Venetian* Merchant about twelve Feet long, and three Feet Diameter; and it weighed so heavy, that he could not lift it. *Vertomannus* saith, that he saw in the Island of *Sumatra* two *Elephants* Teeth, which weighed 336 Pounds. When these fall off, which is about every tenth Year, they bury them in the Earth with their Feet.

The Ivory, which the *Latins* call *Ebur*, is the Teeth, or rather the Weapons, or Arms of the Male *Elephant*; the best and whitest of which come from *Angola*, *Ceylon*, and other Parts of the *East-Indies*. The Trade of Ivory, or *Elephants* Teeth, is very great in *France*, as well as *England*, for many Purposes. There is a Spirit and volatile Salt made from it, by the Retort, which is highly esteemed in Diseases of the Heart and Brain. The Shavings of Ivory are used with those of Hartshorn in Ptisans: they are cooling, drying, and astringent, a pestilential Antidote, moderately binding, and strengthening the Bowels. Take Filings, or Raspings of Ivory, half a Dram; Powder

of Man's Skull, Bezoar Mineral, of each fifteen Grains; mix them for a Dose in the Epilepsy, or any malignant Fever. Mixed with *Japan* Earth, and Jesuits Bark, it is good for the *Fluxus Albus*, Bloody Flux, Weakness of the Back, &c. Likewise Cochineal and Saffron being added, it becomes an excellent Cordial.

Ivory Black is made of burnt Ivory, that is taken from the Fire whilst it retains its Blackness, is then pounded, and with Water made into little flat Cakes or Troches for the Painters, which, when good, ought to be very finely ground, soft, and brittle. The Apothecaries, or others, who distil Ivory by the Retort, instead of throwing the burnt Ivory that remains in the Retort away, may pound it, and make it into little Cakes, or Troches, as I have said before, and then sell it to those who buy Ivory Black, or else put it upon a good Coal Fire, to reduce it to a white Powder, which is called *Spodium*, or burnt Ivory.

Spodium, or Ivory calcined to a Whiteness, is also Ivory burnt for the Purpose, that it may be serviceable in Medicine. The best is that which is white within and without, heavy, easy to break, in fine Pieces, the least full of Dirt and Filth that may be. They reduce this to an impalpable Powder, upon a Marble, and make it into little Cakes or Lumps, and this is what we call prepared *Spodium* of Ivory. The same Virtues are attributed to this, as to Coral and other Alkali's. The Antients, besides Ivory, burnt Canes or Reeds; and the Canes thus reduced to Ashes, were also called *Spodium* or *Antispodium*. The Ivory *Spodium* strengthens the vital Parts, resists malignant Fevers, prevent Micarriages in Women, helps Conception, cures Vapours and Fits, and likewise kills Worms in Children.

The *Rhinoceros* is a four-footed Animal; of the Size of a Bull, whose Body resembles most the wild Boar. He is so called, because of the Horn that grows out of his Snout, which is black, about a Foot and a half long, hard, pyramidal, solid; the Point or Tip whereof turns up again towards the Crown of the Head. This Animal is covered all over with strong Scales. In like manner the Legs are scaled to the Hoofs, which are parted into four distinct Claws.

This Animal is an Enemy to the *Elephant*, and, in fighting with him, fixes his Horn in the soft Part of the *Elephant's* Belly; for which Cause it is said that an *Elephant* will run from him. When they fight they whet their Horn before-hand against Stones. They are not fierce against Mankind without great Provocations. The Cry is like the Grunting of a Hog. The *Indians* make Bottles of their Skins to put Liquors in. The Powder
being

being infused in Wine, or taken by itself to a Scruple, is good against malignant Diseases. The Horn, which is chiefly used as the Unicorn's, is said to be good against all contagious and malignant Fevers; for being a high Alkali, both fixed and volatile, it encounters and destroys the malignant Acids, which stir up and influence the most pernicious Diseases. It is reckoned a singular Sudorific.

Elephas, sive Elephantus, is a Quadruped, *Lemery*. esteemed the biggest in the World, of a monstrous Shape: The Head is great and deformed; the Mouth so large, that a Man's Head may as easily enter into it, as a Finger into the Mouth of a Dog: Their Eyes are really large in themselves, but appear small in Comparison, and their Ears little, in Proportion to the rest of the Body, not much unlike the Wings of a Bat. The Teeth on either Side are four, to eat with and grind their Food, with two others, one on each Side, which hang forth beyond the rest. It has a Trunk at the End of the Snout, called *Proboscis, seu Tuba, seu Manus Nasuta*, which is a large hollow thing, hanging from his Nose, like Skin, downwards, serving instead of a Hand. When he feeds, it lies open to draw in both his Meat and Drink; by this he receives of his Keeper whatever he gives him, and in Swimming draws through it his Breath. It is crooked, gristly, and inflexible at the Root, next the Nose, where it has two Passages, one into the Head and Body, by which the *Elephant* breathes, the other into the Mouth, by which he receives his Meat. With this he fights in War, and is able to take up a small Piece of Money from the Ground, or any other Place; with this he can draw up a great Quantity of Water, and shoot it out, to the annoying of his Enemy.

He is said to have four *Venters*, and Lungs four Times as big as an Ox. His genital Member is like that of a Horse, but less; and the Testicles lie inward about the Reins. The fore Legs are much longer than the hind Legs, of short Joints, and of equal Bigness both above and beneath the Knees; the Ankle-Bones are very low; he bends his hind Legs as a Man when he sits, but not both together, and so leaning on one Side, sleeps most commonly against a Tree. Their Feet are round like Horses, and as broad as a Bushel, having five distinct Toes upon each Foot, which are very little cloven, but without Nails. They are for the most part of a Mouse Colour, or darkish Brown. The Skin is harder on the Back, and softer on the Belly, without any Covering of Hair or Bristles, unless here and there one scatteringly: It is so tough, that a sharp

Sword or Iron cannot pierce it. The Tail is like an Ox's, but without Hair, except at the End. The Sound or Noise they utter has the most Resemblance to braying, and seems as if always hoarse.

The *Rhinoceros*, called so from carrying his Horn upon his Nose, is a large four-footed Animal, that looks as if he was something of the Boar Kind, only that he is much larger, and more lubberly and dull. His Head is thick, and enclosed in a sort of flat Cowl, for which Reason, according to the Rev. Father *Le Comte's* Memoirs of *China*, the *Portuguese* have given him the Name of *Moine des Indes*, or the *Indian Monk*. By reason of his Horn so advantageously placed, he becomes formidable to the Bufflers, Tigers, and Elephants, which he engages sometimes. This Animal is found in the Desarts of *Africa*, in *Asia*, at *Siam*, and in *China*, where they feed upon the Branches of hairy and prickly Shrubs and Trees. The Horns, the Nails, and Blood, are all used in Medicine, containing in them a good deal of volatile Salt and Oil. They are useful to resist Poison, strengthen and fortify the Heart, procure Sweat, stop Fluxes of the Belly, and are good against all contagious Diseases. The Dose is from a Scruple or two, either in Infusion or Powder, which drunk in Wine, purifies the Blood, and is a good Preservative against infectious Air.

[Ivory is the Tusks of the Elephant, *Elephas, Raii Syn. Animal.* 131, &c. The best Ivory we have is from the Island of *Ceylon*. The Shavings of it boil into a Jelly like those of Hartshorn, and have the same Virtues; and the *Spodium ex Ebore* is now never made, because the burnt Hartshorn is found to be the same Thing, in regard to all its Virtues.

The *Rhinoceros* I have already had occasion to speak of, in the Chapter of the *Unicorn*.]

9. Of the Camel.

THE *Camel* is a gentle domestick Animal, whereof there are great Numbers throughout all *Africa*, and particularly in *Barbary*, and the Desarts of *Getulia* and *Libya*, and they are the greatest Riches of the *Arabs*. Those of *Africa* are better than the other, because they will travel forty or fifty Days together upon Barley only, and ten or twelve without eating or drinking at all. The Female carries her Young eleven Months. When the *Camels* travel in the Caravan, the Drivers of them whistle and sing; for the more they encourage and please these Animals, the better they march. Their Food is Grass, Hay, Thistles, Barley, Oats, Rushes, and Herbs. There

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12

The Hart.



The Bull.

10



11

The Ram.



There are three Kinds of *Camels*; those called *Hegin* are the biggest, and will carry a thousand Weight. The second Kind are what they call the *Bechet*, that have two Bunches on their Back, and are the best to ride upon; but these are only to be met with in *Asia*. The third they call *Dromedaries*, which are the smallest and finest, and fit for no other Use but riding upon, and are so swift, that they will travel thirty five or forty Leagues a Day, and continue so to do nine or ten Days, through the Deserts, with little or no Sustenance.

When these Animals are to be loaded, they strike them over the Knees and upon the Neck with a Stick, and they kneel upon the Ground to receive their Burden; and when they are loaded, upon the Sign being given, they rise presently with it. These Creatures bear Hunger and Thirst with great Patience. Some say they carry Water in their Stomachs a long time to cool them, by means of their large Ventricle, about which they find a considerable Number of Bags inclosed in the Tunics or Coats thereof, in which it appears these Animals keep Water in reserve. And hence it is that some Persons affirm, that when the *Turks* go with the Caravan, to *Meccha*, and Water is scarce, they kill their *Camels*, to drink the Water they have in their Stomachs. It is from these Animals we have the Hair that is called by their Names, and of which several fine Stuffs are made; the best of which is that on the Back, and the least full of white Hair: In short, the *Camel* of all Animals is the most gentle, the least chargeable to keep, and brings the greatest Profit to his Owner.

Of natural Sal Ammoniack.

Sal Armoniack, or rather *Natural Ammoniack*, is a Salt white within and without, of a saltish Taste, pretty like common Salt, only that it is more pungent. It used to be brought us from *Arabia* or *Lybia*; but at present we have very little from thence, but the *Venetians* and *Dutch* have found out a Way of making a Composition that near resembles it in its Virtues; there is however a great deal of Difference in the Figure betwixt the natural and artificial.

When the *Turks*, and other People of *Asia* or *Africa*, travel with their Caravans, their *Camels*, passing thro' the Deserts, urine upon the Sands; and the Sun shining fierce on the Urine, fails not to dry it up, and reduce it into a white Mass; the Truth of which I am convinced of by a Piece which Mr. *Tournefort* gave me the 6th of *March*, 1693, whose Figure is here represented, and

marked A, and which I keep by me as a great Rarity. This Piece is crySTALLIZED; that is to say, it appears on the Top like Needles, as Salt Petre refined, and is hollow on the under Side, where there is also some Sand sticking to it, which shews that the Salt is sublimed by means of the Sun, and rises up from the Sands, that are very hot.

The Antients universally agreed, that there was a natural *Sal Ammoniack*; that this Salt was found in the *Lybian* Sands, and that it was made from the *Camels* Urine which travelled to the Temple of *Jupiter Ammon*, from whence it took its Name: And others say that it comes from the Greek Word *Ammi*, which signifies Sand; and therefore we ought not, as is commonly done, to call it *Armoniack*, but *Ammoniack*. There is besides this, another natural *Ammoniack*, or rather more properly speaking, an artificial one, which is made after the same Manner as we make *Salt Petre*. It is, drawn from a kind of Earth; or saltish Scum, that ouzes out of old Caverns, and the Chinks of Rocks, betwixt *Labor*, *Thanufferi*, and *Tzerhint*. But as these two Salts are almost unknown to us, and we meet with but very little if any of them, we must content ourselves with that brought from *Venice* or *Holland*; but the last is chiefly what comes to *Paris*, especially in Time of Peace.

Of artificial Sal Armoniack.

This *Sal Armoniack*, or rather *Acrimoniack*, or, according to some, *Acrimomial*, is a Mass or Composition of several Things, made in Shape of a Pot-lid, which the *Venetians* or *Dutch* make, according to the Relation of several Authors, from human or animal Urine, common, or Sea Salt, and Chimney Soot, boiled all together, and sublimed into a Salt, and formed into Cakes, as we have it now brought to us. Some have assured me that *Sal Armoniack* was likewise composed of Blood, which I cannot affirm, having never seen it done.

They used heretofore, to send us from *Holland* and *Venice*, a *Sal Armoniack* in the Shape of a Sugar Loaf, which was much finer than what we have in Cakes at present.

That *Sal Armoniack* is the best which is clearest, whitest, and most transparent, and which being broke, there appear in it as it were Needles, and that which is the driest; but reject that which is black both on the Upper and Under-side, and which being broke, is almost all grey or black. Which is occasioned by the Avarice of the Makers, who raise up too much of the Matters it is composed of, by too violent a Fire. That

which

which comes from *Venice* is the purest ; but that from *Antwerp* and *Holland* is the most common Sort. The Use of it is very considerable for several Trades, besides the many excellent Preparations made from it in Chymistry. It serves the Dyers, Goldsmiths, Founders, Pin-makers, and almost all that work in Metals, and the Farriers. And it is so acrid and piercing, that being dissolved in *Aqua fortis* or Spirit of *Nitre*, it gives them a Power of dissolving Gold, which before they could not touch.

It is aperative and sudorifick, resists Putrefaction, and is good in Quartan Agues : the Dose is from a Scruple to half a Drachm. It is also good in Gargarisms, for the Quinsy, and in Eye-waters for Dimness of Sight ; but in these Cases it must be used with Discretion.

In the Sublimation of this artificial Salt, according to the Composition mentioned before, the volatile alkalious Salts of the Urine and Soot do raise up as much of the Acid, or Sea Salt, as they can hold ; so that it appears this Salt consists of two different Natures and Properties, to wit, of Acid and Alkali, fixed and volatile, and accordingly two different Spirits, or Salts, may be drawn from it, *viz.* a volatile alkalious Spirit and Salt, and an acid Spirit and fixed Salt.

To purify Sal Armoniack.

Dissolve it in a sufficient Quantity of Water, filterate the Dissolution, and in a Glass Vessel either evaporate till it is dry, by which you will have a pure white Salt, or evaporate till a Pellicle arises ; and set it to crystallize according to the usual Way. You may also purify *Sal Armoniack* by Sublimation, thus : Take *Sal Armoniack* in Powder, and Sea Salt decrepitated, or rather Smiths Scales ; of each equal Parts, mix them, and put the Mixture into an earthen Cucurbit ; and having placed it in Sand, fit to it a blind Head ; give a gentle Fire at first, and encrease it by little and little, until you can see the *Sal Armoniack* rise up like Meal, and stick to the Head and uppermost Part of the Cucurbit, and continue the Fire till nothing more will ascend : The Vessel being cold, gather these Flowers with a Feather, and keep them in a Glass close stopped. They are only *Sal Armoniack*, and their Virtues the same with the former, being given only to one Scruple. Thus purified from Sea-Salt, the Flowers are white ; but from Iron Scales they are of a yellowish Colour ; the latter being much the better, and more successful against Quartans ; and both of them are very powerful Agents in all chymical Operations, for extracting the Sulphurs of Metals and Minerals, both by the

Help of Sublimation, and otherwise. This *Sal Armoniack* purified, is also used outwardly against Gangrenes, and to consume superfluous and corrupted Flesh. It prevails in a Gargarism against the Quinsy and Inflammation of the Throat, and in a Bath it gives Relief in the Gout, especially if Cloths be made wet therewith and applied.

Of volatile Spirit of Sal Armoniack.

Take *Sal Armoniack* and quick Lime in Powder, six Ounces of the first, and one Pound of the latter ; mix them in an Iron Mortar ; add three or four Ounces of Water ; put them quickly into a Retort, the half whereof is empty ; set it in a Sand Furnace, with a very large Receiver, luting the Junctures close ; begin the Distillation without Fire for a quarter of an Hour ; then add the Fire, increasing it by little and little, till no more Spirits come forth. Take off the Receiver, and immediately turning away your Nose, put the Spirits into a Glass, which keep close stopt for Use ; you will have four Ounces of Spirit or better. This is stronger than that made with Tartar, being endowed with the fiery Particles of the quick Lime ; which being mixed with Spirit of Wine, prevents the coagulating ; whereas that made with Tartar will cause a *Coagulum* upon the Spot. This Spirit prepared either Way, corrects and hinders Putrefaction, more than most other Things in the World ; and powerfully resists the Poison or Venom of the Plague or Pestilence ; and is very profitably given against all putrid Fevers. The volatile Spirit and Salt are more subtle and penetrating, and of a kinder Taste and Smell than those which have been extracted out of plain Urine, because they were not fermented and depurated by common Salt. This Spirit is good in all hypochondriacal Cases, Suffocation of the Womb, &c. but chiefly against Diseases of the Head ; as Vertigo, Lethargy, Epilepsy, Deafness, Palsy, Trembling, and the like. In a word, it is good in all Diseases proceeding from Corruption, or Obstruction of Humours.

Of the acid Spirit, and fixed Salt of Armoniack.

After the Spirit is drawn off with Tartar, instead of Lime, there remains at the Bottom of the Vessel seven Ounces, and better, of a white fixed Mass, from which you may distil an acid Spirit, as you do Spirit of Salt ; for indeed it is a Kind of Spirit of Salt or little other ; otherwise you may dissolve it in Water, filtre and crystallize, so will you have a very good Salt against intermitting

permitting Fevers, given from ten Grains to thirty. This is as agreeable an Acid as any we have; and is very proper to allay the Heat of Fevers, to provoke Urine, and stop the too violent Fermentations of the Blood. There is another Way of making the fixed Salt, by the Means of Egg-Shells, or quick Lime, which they reduce with the former Mass, into a clear transparent Body, like Chrystal, which is a very good Caustick, but easily runs to Water; for which Reason, those who are desirous to keep it, put it in a Glass Bottle well stopp'd, so that no Air can enter. This fixed *Sal Armoniack* being reduced into a Liquor, is what some call, tho' improperly, Oil of *Sal Armoniack*; and is indeed an Oil *per deliquium*, which several Persons keep for the Resuscitation of Quick-Silver.

Camelus, or the *Camel*, is a very tall *Lemery*. tractable Beast, that is of mighty Service to all the People of *Asia* and *Africa*. His Neck is long, the Body very thick and broad, having a Bunch on his Back, and some Kinds two. The Tail is like that of an Ass; his Buttocks are small, considering the Bulk of his Body, and the Legs very long. The Female goes with Young eleven, and sometimes twelve Months; and when the young Ones arrive at an Age and Size fit for Service, they load them with Burdens as we do Horses in *Europe*. But as this Animal is very high, so that it is difficult to load them, they are taught, while young, to kneel down upon their Knees to receive their Burdens; and this is the Reason that they become, in Time, so callous and hard, that they have scarce the Sense of Feeling on that Part.

These Camels are the usefulest Creatures in *Africa*. The *Arabs* make great Advantages of them, because they will live hard, and endure both Hunger and Thirst with much Ease, and wonderful Patience. These Beasts are great Lovers of Singing, and other Musick; so that those who travel long Journeys with them, sing or pipe all the Way to make them go the faster and more chearfully. There are three Sorts of them; the first, or largest sized, is called *Hugium*; the second, more peculiar to *Asia*, is named *Becheti*; and the third is *Dromas* five *Dromedarius*, the *Dromedary*, which the *Arabs* call *Raguabil*; and is a small, thin, lean Creature, in respect of the others.

All the Parts of the *Camel* yield a great deal of volatile Salt and Oil; the Flesh being eat, provokes to Urine; the Grease or Fat is emollient, softening, and resolute, proper for the Piles or Hemorrhoids: The Brain being dried and beat to Powder, is good for the Epilepsy. The Gall

mixed with Honey, is reckoned proper for the Quinsey; the Milk loosens the Belly, procures an Appetite, relieves and gives Ease in an *Asthma*. The Blood is said to be proper to incline Women to conceive, if the Region of the Womb be fomented therewith after the menstrual Flux. The Urine is good to cleanse the Teeth, and make *Sal Armoniack* of. The Dung is vulnerary and detersive, and the Milk and Flesh good to eat, so that the *Arabs* feed upon them.

[The *Camel* used as a Beast of Burthen in the *East*, is the *Camelus*. *Jonsf. de Quad.* 67. In regard to this Creature and the *Dromedary*, it may be observed, that Authors have been very much divided in their Opinion about which of them it is that has two, and which but one Bunch on its Back: But the Truth certainly is, that the *Camel* common in *Asia* and *Africa*, and constantly used there as a Beast of Burthen, has only one Bunch; and that the *Dromedary*, which is a very scarce Animal, and only found in the Possession of great Persons, has two Bunches on his Back, and is never used otherwise than as a Beast to ride on, as it is light, and travels very swiftly.

The Blood, Gall, Dung, and Urine of the *Camel*, are all commended as great Medicines in several Intentions, but are never used at present, except in the Share the two last of them have in the *Egyptian Sal Armoniack*.

In regard to the *Sal Armoniack*, the true natural *Libyan* Kind, said to be produced by the Action of the Sun upon the *Camel's* Urine on the Sands, is now wholly unknown among us, nor can we any where find a certain Proof that there ever was such a Thing; for what the Antients describe under this Name, was a fossile Salt of the Nature of *Sal Gemm*. But however that be, we have at present three Kinds of crude *Sal Armoniack* in the Shops, the common, the *Egyptian*, and the *Italian*, of which the first is almost the only kind now used, and kept by the Druggists. The first or common *Sal Armoniack* is made at *Venice*, in *Holland*, and in other Places, with five Parts of human Urine, one Part of common Sea Salt, and half that of Wood Soot, boiled into a Mass, and sublimed into the Form we see. The second is brought from *Grand Cairo* and other Parts of *Egypt*, and is made with the Soot of *Camels*, Cows, and Pigeons Dung (which is the common Fuel of the poorer People of *Egypt*, when made up into Cakes with chopt Straw and dried) mixed with Salt, and *Camels* Urine, and sublimed into flat Cakes in Glass Vessels made for that Use: And the third, or *Italian Sal Armoniack*, is formed by the Soot and Smoak of burning Mountains; and gathered from the Rocks about *Putcoli*. This

is the only Kind of this Sort that can with any Justice be called a native or natural *Sal Armoniack*. We have, beside these, a *Sal Armoniack* in Cakes like Sugar Loaves, brought to us from many Parts of the *East-Indies*, but as there is very little Difference between this and the *Egyptian* Kind, I forbore to name it as a fourth Sort.]

10. Of the Bull, &c.

Pomet. **T**HE Bull, Ox, and Sheep, are Animals so well known to all the World, that it would be useless to give a Description of them. There is sometimes found in the Gall Bladder of Oxen, a Stone of the Colour and Shape of the Yolk of an Egg, that is soft, and of divers Crufts like the Bezoar; for which Reason it is called the *Ox Bezoar*, or the Gall-Stone, which if good ought to be high-coloured and well-dried; for if they are purchased when taken fresh from the Animal, they waste considerably in drying. Sometimes this Stone is sold pretty dear, especially if it falls into the Hands of Persons who know it's Value. The greatest Use that is made of it is for painting in Miniature, as they use Gamboge. The same Virtues are ascribed to this as to *Bezoar*. But as this Stone is to be met with at home, it makes it not so much valued as *Oriental Bezoar*. We likewise sometimes meet with a Cartilage in the Heart of an Ox, like that of a Stag, to which they give the Name of the Bone in the Heart of the Ox, which is now and then used in Physick, instead of that in the Stag's Heart, tho' improperly.

By the burning of Beef Bones, there is a Black made, called *Bone Black*; it ought to be fine, brittle, shining, and well ground; its Use is for Painting. There is a Glue made of the Cartilages, &c. well boiled in Water, which is cast into Moulds, and afterwards spread out and dried. This is then called *Bulls Glue*, or strong Glue, of which they make a considerable Trade in *France*, especially of that made in *England* or *Flanders*.

The strong *English* Glue ought to be chose well boiled, dry, clear, and transparent, of a reddish brown, easy to break with the Fist, not gravelly or foul, but the smoothest and neatest that can be had; rejecting such as when melted stinks much; as all the strong Glues that are made at *Paris*, or thereabout, do, which are less valued for any Kind of Works, than that which is brought from *England*. The *Flanders* Glue ought to have the same Qualities with the former; but is not so much boiled; they use this Glue for Hat-

making, it serving them better than that of *England*, as well as to paint in Water Colours.

The *West-India* Company in *France* bring, especially to *Rouen*, a great Quantity of Ox Hides from *Barbary*, of which the Merchants of *Rouen* make a considerable Business, tho' at *Paris* they sell but few. The greatest Share comes from *Senegal*, with the Gum and Gold Dust. As the Merchants of *Rouen* are obliged to give Credit for three Years to the Tanners, if by Accident any Tanner come to fail or die, and that the Successor of him is not able to pay for his Goods, the Merchant is permitted to open his Tan-Pits, and withdraw his Merchandize. Besides these, we sell many other things had from the Bull, as Ox-Hides from *Hungary*. The best are the whitest, and the true *Hungarian*, because they are much better than those which are wrought in *France*. Likewise *English* Calf-Skins, and others without Hair, which come from several Parts, as also Flocks and Beasts Hair. And beside all these we trade in Beef-Suet, from *Ireland*, which ought to be new and white.

Bos, in *English* the Bull, Ox, or Cow, *Lemery*. are sluggish, horned Beasts, which chew the Cud, and cleave the Hoof; the Horns of the Bull are short, of the Ox very large. It is a Beast generally known, differing much in Shape, Size, Horns, and Colour, according to the Variety of Countries where brought forth. They yield from every Part a great deal of Oil and volatile Salt. The Flesh of the Bull is coarse and tough to that of the Ox. The Cow's Flesh, if fat, is good Meat; but if old and lean, it is not eatable. The young Bullock's Flesh is fine, but much inferior to the Ox's. Veal is a pleasant Meat, easy of Digestion, loosens the Body, and heals the Bowels in a Bloody-Flux.

The Blood drunk warm is said to cure the Epilepsy; besmeared upon the Skin warm, it takes away all Foulness; and is also good against the Gout and other Pains. The Fat is emollient, and is used in Balsams, Ointments, and Plaisters. It eases Pains proceeding from Colds; cures Kibes and Chilblains, and heals the chapping of the Hands, Lips, Nipples, Fundament, &c. The chymical Oil is good against the Gout, Palsies, Numbness, Contractions of the Nerves and Muscles, Lameness, &c. The Marrow is of the same Effects, but much finer. The Horns are alexipharmac, and by some called the *English Bezoar*; the Powder rasped from the Horn much exceeding the truest and best *Oriental Bezoar*. Moreover, it is of singular Use in the Falling-Sickness, Fits of the Mother, Convulsions, Palsies, Lethargies, &c. The Hoofs and the volatile Salt thereof
are

are Specificks for all the Diseases the Horns are said to be good against.

The Gall, mixed with the Marrow and Fat of a Hen, and dropt into the Ears, eases their Pain. That of a Bull is sharper and stronger than of an Ox or Cow; and mixed with Honey is a good Vulnerary, and cures almost all Diseases of the Eyes, if curable. There is no better Eye-salve than it is. By itself it is a good *Collyry* against Blood-shot, Clouds, Films, Haws, or Pearls in the Eyes. Mixt with *Myrrh* and *Aloes*, it cures Ulcers of the Penis and other Parts, as also the Piles. Mixt with Nitre, it removes Scurf and Leprosy. The Dung is temperate, discussive, anodyne, &c. The Urine drank, cures the worst Kind of Jaundice and Dropsy, by provoking to Urine; the volatile Salt and Spirit, are powerful Openers of Obstructions. They find sometimes in the Stomach of an Ox or Cow, a Sort of large Ball like a small Apple, of a round Figure, a little flattish, having usually towards the Middle a round Hole, wherein one may put one's little Finger; it is of a reddish grey Colour. This Ball is made of the Hairs which the Ox or Cow licks off herself, and which, in Process of Time, stick one upon another 'till they are collected into a Mass. It is reckoned proper to stop the Hemorrhoids and other Fluxes; the Dose being from half a Scruple to half a Drachm, powdered and taken inwardly. It is likewise used externally, like Spunge, to deterge and dry up Wounds.

There is another Kind of this Creature, called a *Bison*, which is but a wild Cow, Bull, or Ox, breeding in *Scythia*, *Muscovy*, and *Scotland*; but those in *Scotland* are white. It is called *Vacca Paonica* in *Latin*; in *Greek*, *Bison*. They differ nothing from the common Cow or Ox, save that their Mane is like a Lion's; and they have a Beard under their Chin, being much larger than those which are common with us: Those in *Scotland* are of a lesser Kind, where they were once in vast Numbers, but are now mostly destroyed. Their Flesh, and all their other Parts, are equal in Goodness with the common Sort before treated of.

To the *Bison* we will add the *Urus*, called in *English*, the *Ure-Ox*, or *Cow*, but unknown to the *Greeks*. These also are a Kind of wild Oxen or Cows, differing little or nothing from our common Ox or Bull, save in their Magnitude or Stature, coming near to the Bigness of an Elephant; when grown up they are a wild untameable Creature, nor can they be made sociable like ours, unless they be taken when Calves, and brought up young. They breed in the Woods of *Hercynia*, in the *Pyrenean Mountains*, in *Prussia*,

&c. where they are said to be so wild, cruel, and untameable, that they neither fear or spare Man or Beast. Their Largeness and Strength is incredible. Their Goodness for Food, and Virtue of their Flesh, Milk, Hides, Horns, and other Parts, as also the Flesh of their Calves, differ nothing from our tame ones, nor is their Beef any ways inferior to ours, but is only of a larger Kind.

[There is hardly any Part of this Animal which has not at one Time or other been celebrated for its medicinal Virtues; but what are principally used now, [are the Gall, which mixt with the Powder of *Colocynth*, and applied as a Plaister to the Belly, is said to purge and destroy Worms; and the Oil of the Feet, which is an Ingredient in the Ointment of *Marsh-mallows*.]

II. Of the Ram, or Sheep:

SHEEP are one of the most necessary *Pomet.* Animals for the Use of Mankind, and therefore bred in most Nations of the World; though the Difference of Climate makes some Difference in their Colour and Shape. The Sheep of *Greece* are less than the Sheep of *Ægypt*, and the *Oves Pyrrhicæ* were like Oxen, by Reason of their exceeding Largeness, their Name being derived from *Pyrrhus* their Master. The Sheep of *Chios* are very small, and the Rams of *India* not much bigger than our Lambs. In *Spain* their best Sheep have black Fleeces, and all their Sheep bear exceeding fine Wool. Near the *Alps* they are grey, or Honey-coloured. In *Asia*, *Bætica*, and *Erythræa*, red like Foxes. At *Canusium* they are yellow, or Lion Tawny: And so also at *Tarentum*. In *Istria* and *Liburnia* the Sheep bear Wool so coarse, that it may rather be accounted Hair than Wool. The Sheep of *Apulia* gave the Name of *Lana Italica* to a Kind of excellent Wool; yet it was short and coarse, good for nothing but to make Garments to ride in, and to wear in rainy Weather. The *French* Sheep are not of the best Kind; but the *Flemish* have a fine, soft, curled Wool; so also have the Sheep of *Mileum*, *Attica*, and *Gadilonea*. Those in *Pontius* and *Cappadocia* coarser. In *Scotland* the Sheep bear good Wool; but that of the *English* Sheep excels, in Softness and Fineness, all other Wool in the World, except the *Spanish* Wool; and yet the *Spaniards* had the Sheep which bears that superfine Wool first from *England*. In *Æthiopia* the Sheep bear no Wool at all, but Hair like Camels Hair. In *Gortynis* the Sheep are red, and have four Horns. In some Parts of *India* both Sheep and Goats are as big as Asses, and bring often four Lambs at a Time, never less than three.

three. The *Arabian* Sheep are in Size, Figure, and Colour, like the *English* Sheep; but there are two Sorts amongst them that are distinguished by the Length and Breadth of their Tails, being so extravagant both Ways, that the Sheep cannot move from one Place to another without Assistance.

Besides the common Sort of Sheep, there are two Kinds of wild Sheep, the *Musmon* and the *Subus*. The *Musmon* is not unlike a common Sheep, except in its Wool, which seems to be rather the Hair of a Goat, being the same which the Antients called *Oves Umbricæ*, the *Umbrian* Sheep. Some will have this to be a Kind of wild Goat, which it does not so much resemble, for it wants the Goat's Beard, and its Horns are absolutely like Rams Horns. They are bred in *Corsica*, *Sardinia*, and *Spain*; and are said to be got between a Ram and a She-Goat, as the *Cinyrus* is between an He-Goat and a Ewe. The Form of the *Musmon* is much like a Ram; his Horns grow from his Head like a Ram's, and bend backwards almost to his Ears; it is exceeding swift of Foot, not much inferior to the swiftest Beast. The Skins of them are so thick, that in the Place where they are bred, they are used for Breast-Plates. These Sheep live on the Mountains, and are admirable Meat, but are scarcely found any where now but in *Sardinia*.

The *Subus* is a Kind of wild, or rather Water-Sheep, of an amphibious Nature, living both on the Land and in the Water; he eats Fish, but tarries no longer in the Water than 'till his Belly is full. This Sheep is of a bright yellow Colour, like those of *Crete*, but its Wool is not so rough. It has two large Horns upon its Forehead, swims well, and is very greedy after Blood. Thus much of the wild Kind, and such as are not common; we shall now return to those that are so.

The Sheep is the mildest and most inoffensive of all the Creatures upon Earth, of which there is no Part but what is profitable and useful to Mankind: The Flesh, Blood, and Milk are for Food; the Skin and Wool both together, and apart for Cloathing: The Bones for making of Tests or Coppels to melt Gold in; the Guts for Instruments of Musick and Bow-strings; the Horns and Hoofs for Trumpets, and other little Toys, besides their physical Use, and the Dung for manuring of Land. Their Flesh is the universal Food of *Europe*; and in some Countries they make Butter and Cheese of their Milk. As to their Wool, they are very profitable in all Nations, being shorn in the cold Countries once a Year; but in the hotter Countries twice a Year. In some Places they are never shorn; but accord-

ing to the old Custom, they pull the Wool from the Sheep's Back, whence the Name *Vellus*, a Fleece, is supposed to come à *Vellendo*, from pulling.

Having thus far given a Description of this Animal, I shall now proceed to shew its medicinal Uses. From the Horns is drawn a volatile Oil, Spirit, and Salt; which are efficacious against Diseases of the Head, Brain, and Nerves; as Epilepsies, hysterical Fits, Vapours, &c. From the Hoofs and Urine you may extract the same Preparations. The Dung is a prevalent Medicine against the Jaundice, Dropsy, Cholick, Pleurisy, Spleen, Stone, Gravel, Scurvy, &c. taken either in Powder, Tincture, or Decoction. The Dung made into a Cataplasm with Camphire, Sal Armoniack, and a little Wine, opens, digests, attenuates, and eases Pain. It is excellent in Abscesses about the Ears and other Emunctories, Swellings in Womens Breasts, Pain of the Spleen and Gout.

The Skin, besides its Uses for Leather, Parchment, Size, &c. has some medicinal Uses of considerable Moment. A Lambskin, newly taken off and applied hot, is an admirable Thing to give Ease in Pain, strengthen any weak Part, and cure a Bruise when newly received, as is also a strong Decoction made of it in Claret, bathing in it as hot as can be endured, it will assuage Tumours, strengthen weak Joints and Limbs, and restore a Wasting of the Parts, from an Atrophy or Consumption; and some say it is powerful enough to remove a *Diabetes*.

The Tallow and Cawl serve for making Balsams, Ointments, and Emplasters; and the Marrow is good against the Cholick, Gripings of the Guts, and Exulcerations of the same. The *Oesiphus* is the Sweat of the Sheep condensed upon the Wool, and making it greasy. The People who wash the Wool save it, and put it up in Barrels to send to different Places; most of what we sell is brought from *Berry* and *Beauce* in *Normandy*, but the Demand for it is now grown very small. It ought to be chosen new, of a middling Consistence, for the longer it is kept the more it hardens, and will in Time come to the Consistence of hard Soap; the Smell also ought to be tolerable, for there is some so stinking, that there is no coming near it. It ought to be of a greyish, or Mouse Colour, and as clean as may be. In long keeping it acquires a perfumed Smell, as I have experienced. It is emollient, discutient, and anodyne, being useful against Contusions, Strains, and Weakness of the Joints and Limbs. We also trade in Mutton Suet, especially that of *Holland*, which ought to be of a clear white. The Guts being cleansed, dried, and twisted, serve for Strings to Bows and Instruments of Musick. A Jelly

Jelly made of Sheeps Feet, is prevalent in Consumptions, Fluxes of the Bowels, Exulcerations, and the like.

There is great a Trade carried on throughout the World with Wool; and, amongst the rest, *Persian* Wool is in great Vogue. The best of which is the softest, and least full of long Hairs; but *Spanish* Wool is reckoned the finest and most saleable Commodity; of which there are these several Sorts: *Vigognia* and *Segovia* Wool the finest Sort, the small *Segovia* and *Segewen Segovia* of *Castile*, &c. The ordinary Sort of *Navarre* and *Aragon*; the finest white Wool of *Sevil*, *Malaga*, and *Portugal*. Besides these, there are the *German* Wools of *Rostock*, *Stralsund*, and *Anclam*, *Newmark*, *Weydacker*, *Stetin*, *Thoorn*, *Dantzick*, *Prussia*, *Lunenburg*, and *Bremen*. The Wool that is produced in *Berry*, and the adjacent Parts of *France*, is the longest, and generally the coarsest in *Europe*.

[Almost every Part of the Sheep have, like those of the Bull, been celebrated for some medicinal Virtue; but the present Practice takes very little Notice of any of them, except of the Suet as in an Ingredient in Ointments and Plaisters.

The *Æfypus* is now hardly any where to be met with, though it has always held the Credit of a useful external Remedy, as indeed all Animal Fats may, with very good Reason, be supposed more subtil and penetrating, from the Share of volatile Salt they contain, than those expressed from vegetable Substances.]

12. Of the Hart, or Deer.

Pemet. **T**HE *Deer* is an Animal so well known every where, that it would be needless to give a Description of it. I shall only inform you that there are three Kinds understood by this general Word *Deer*, viz. *First*, The Hart and Hind, which are called in *England* the *Red Deer*; *Secondly*, The *Fallow-Deer*; and *Thirdly*, The *Roe-Buck* and *Doc*. All which are Animals of very long Lives, as may be seen by a Stag's Horn kept at the Castle of *Amboise*, of a prodigious Length, which testifies the extreme Age of the Creature that bore it. Some *French* Historians relate, that *Charles* the Sixth killed a *Deer* in the Forest of *Senlis*, which had a Golden Collar about his Neck, wherein were engraved these Words, *Hoc Cæsar me donavit, Cæsar gave me this*. This answers to a Story that passes in *England*, where it is reported, that King *James* the First, in hunting, took a *Hart* with a Collar, having an Inscription with *Julius Cæsar's* Name thereon. But as to the Longevity of the Creatures, antient

Authors have been abundantly more profuse in their Allowances than the Moderns; for it is affirmed by some of the former, as a positive Truth, that *Agathocles*, King of *Sicily*, hunting in *Calabria*, took a *Hart* with a Collar upon him, on which was written *Diomedes Dianæ*, which was supposed to be done before the Siege of *Troy*, which was a thousand Years before his Time.

The red and fallow *Deer* are generally found in all Countries of *Europe*, and several Parts of *Asia*, *Africa*, and *America*, in Parks, Woods, or Forests, feeding upon Grass, Hay, Herbs, and Leaves of Shrubs and Trees. The *Roebuck* is bred chiefly in *America*, *Syria*, *Arabia*, *Greece*, and several Parts of *Africa*, in *Lycia*, *Italy*, *Spain*, the *Alps*, and *Germany*. It is observable, that the *Lycian Roes* never go over the *Syrian* Mountains; yet their Delight is wholly among Hills and Rocks.

As to the medicinal Uses of the Parts of these Animals, they are in the main one and the same; and therefore in treating of them, we shall do it generally for all at once. *The Horns are the principal Parts in Use, whereof there are many Remedies prepared; as the Raspings, the calcined Powder, the Jelly of Harts-Horn, the Oil, Spirit, and volatile Salt; and the Stag's Head Water, which is an excellent Medicine to facilitate Delivery, resist Poison, and cure malignant Fevers. The Dose is from one Ounce to four, but those who want it should take care to buy it of honest People, it being very scarce. The Oil, Spirit, and Salt are great Cordials, and good against fainting and swooning Fits, Heart-burnings, Convulsions, Falling-sickness, hysterical Fits, and provokes Sweat; the calcined Powder stops Fluxes. The Hoofs have the same Virtues with the Horns, but are much more powerful Cephalicks; the Spirit, or volatile Salt, or Oil, being excellent in Epilepsies, and Fits of the Mother. The Bone, or rather Cartilage, that is found in the Heart of an old Deer, is said to be cordial, and is brought into the Confection of *Hyacinth*. It revives the Spirits, expels Melancholy, and helps the Palpitation of the Heart. This Bone is supposed to be the Effect of a *Polypus*.

The Bones of this Creature, distilled in a Retort, yield a volatile Spirit, Salt, and Oil, but neither so fine, or so much in Quantity as arise from the Horn. The Fat or Suet is equal to the best Emollient. It lenifies and softens Callosities, Contractions, schirrous and cancerous Substances. The Marrow being purified, and prepared for keeping, has the same Virtues, and may be used the same Way. The Powder or Filing of the Penis, given in Wine, is diuretick, and good against the Colick and Dysentery:

Some have affirmed it provokes to Venery. The Skin or Hide of the Haft, Hart, Hind, Buck, or Doe, are of great Use, when dressed, for Garments, Gloves, Stockings, Bags, Shoes, Boots, and other Things; and the Stones that are sometimes met with in the Stomach, or Gall-bladder, are something like *Bezoar*, both in Figure and Virtue, but not altogether so powerful, and nothing near so much valued.

Cervus, or the *Deer*, is a large four-footed Animal, that is very lively, sprightly, and agile, living a long Time, and bearing a great Branch of Horns, that serve him for his Defence, and drop off in the Spring-time, instead of which new ones put forth. The Female Hind or Doe, is called *Cerva* in *Latin*; the young one *Hinnulus*, or the Fawn. The whole abounds with abundance of volatile Salt and Oil. The Velvet Horns are so soft, during the first Month, that they may easily be beat off; and being made into a Jelly, are used to hasten the Birth. The Raspings of Harts-Horn are proper for Ptisans, Jelly, &c. The Bone found in the Heart of a Stag, is sometimes half as long as the little Finger, broad as the Nail, flat and thin, usually triangular and white. Chuse the least rather than the biggest, because the Bone in an Ox's Heart is often imposed upon you for that. It is almost cartilaginous when taken out of the Animal, but hardens into a bony Substance afterwards. The Bone in the *Deer's* Heel is proper in the bloody Flux, being given in Powder to a Drachm. The Marrow is yellowish, inclining to white, and may be used externally in *Rheumatism* *Sciatica's*, &c. The Suet is likewise profitable for the same Ends, being emollient, strengthening to the Nerves, and resolute.

[The Virtues of Harts-Horn are too well known to need any Thing to be said of them here. The *Os de Corde Cervi* is a Congeries of Arteries at the Basis of the Stags Heart ossified, as we sometimes find the crural and other Arteries in human Bodies. Its Virtues seem to be altogether imaginary, and it is seldom to be met with genuine, if it were of any real Value; the same ossified Substance from the Hearts of Oxen being often sold in its Place, and oftener than that the *Ossa Hyoidea* of various Animals.]

13. Of the Goat.

Pomet. THE Goat is an Animal universally known in *France*, *Italy*, *Cyprus*, *Candia*, and other Parts. The chief Commodity we sell which comes from these Animals, is a Kind of Fat or Grease which is found stick-

ing to the Beards of the Animals, especially such of them as feed upon the Leaves of a certain Shrub, very common in the hot Countries, which the *Botanists* call *Cistus Ledum*. The Leaves are long and narrow, rough, very gluey, of a dark Green, and continue all the Year.

The Inhabitants of the Country gather this Grease with wooden Instruments, like Combs, and then make it up, being commonly full of Hair and other Filth, into a Mass, or Cakes of different Size and Weight, which is what is called natural *Labdanum*, or *Ladanum*, or *Labdanum* in the Beard; but since the Islanders understood that there was a sweet pleasant Smell in this greasy Matter, and that when it was well purified, it would be considerably valued, they have taken care to melt it, and strain it through Cloths, as well to take out the Dross, as to give it a more fragrant Smell. Having thus refined it, they wrap it up in fine thin Bladders, as we have it brought us, and to which we give the Name of *Liquid Labdanum*, or *Black Balsam*. This Fat, thus prepared, is much used in *England*: As for what is used in *France* it is scarce worth speaking of; the Presumers being the only People that deal in it, either because of its Dearness, or because it is but little known. The remaining Mass, from which they have expressed the *Liquid Labdanum*, they make into Rolls, in the Shape of the Rolls of Wax-candle, and this they call *Twisted Labdanum*.

Chuse the bearded *Labdanum*, the most fragrant and cleanest you can get. The liquid Kind ought to be of a thick Consistence, of a fine Jet Black, sweet and pleasant, of a Smell, inclining to that of *Ambergrease*, which has given occasion to some Merchants to sell *Liquid Labdanum* for black *Ambergrease*. As to the twisted Sort, it ought to be rejected, as being full of nothing but Dirt and Sand, as may be known by its Weight, and by the Quantity of shining Particles it is full of; notwithstanding its being the worst, it is however much used, as it is cheaper than the best, and easy to Powder. Besides these different Sorts of *Labdanum*, we have prepared Goat's Blood, which is used in Medicine; and that it may be endowed with the excellent Qualities, which the Antients attributed to it, the Beast must be fed for some Time with aromatical Herbs, and such as are proper to break the Stone, and must not be above four or five Years old. Having cut its Throat, you are to reserve only the middle or second Blood, rejecting what comes out first and last. This middle Blood you are to put into an earthen Vessel, covered with a clean Cloth, to hinder Dust or Dirt from falling into it, and then expose it to the Sun, or set it in the Shade to dry; and when



The Wild Goat

14

The Goat-feeding on a Cistus.

13



The Shanny or Rock Goat

15



The Shaheen.

16

it is well dried, it ought to be put into a Glass Phial to keep it for Use. They usually prepare the Blood of a Goat in the Month of *July*, when the Creature has had Time to feed on aromatick Herbs. It is sudorifick, aperitive, and resolvent; good in Pleurifies, Stoppages of Urine, and the Stone. The Dose is from a Scruple to two Drachms. *Van Helmont* affirms, that if you hang the *Goat* by the Horns, and bending the hind Feet to the Sides of his Head, in this Posture cause his Testicles to be cut out, and dry the Blood that runs from the Wound, it will become as hard as Glass, and difficult to be beat into Powder, and quite different from that taken from the Throat. He also asserts, that one Drachm of this taken will infallibly ease and cure the Pleurisy without Blood-letting.

We bring from *Auvergne* near *Lyons*, and *Nevers*, a great deal of *Goats Suet*; it being not only of some Use in Physick, especially that of the He-Goat, but also used to many different Purposes. It ought to be dry, of a clear white within and without; and take care it be not mixed with Mutton Suet, which is not easy to distinguish; therefore do not buy it of Merchants you cannot trust. As to the Skin, it is of great Use; as, to carry Wine, Oil, Turpentine, and many Liquors in. The *Eastern* People use the Skins of these Creatures to cross a River with, and in the Rafts or Floats of Timber on which they carry their Goods upon the Rivers in the *East-Indies*.

Besides these Uses, the People of the *Levant* dress Goats Skins, and Sheep Skins, and dye them of a red Colour, by the help of Stic-Lac, and other Drugs, and then they become what we call *Turkey Leather*, which we have a considerable Trade in, because of the great Use made of it in *France* upon several Occasions. The true *Turkey Leather* should be of a beautiful Scarlet Colour, and a fine Grain. We make this Kind of Leather at *Marseilles* and *Paris*; but it is not of so good a Colour, and will not last so long. As to the black Leather, the best comes from *Barbary*, in that it is of a finer Black, and better Grain. They make this also at *Roüen*; but it is neither so good nor so beautiful, as those made in *Barbary*.

The Goats Skins, that have brought over the *Provence* Oils, are bought up by People, who dress and make a kind of Chamoy Leather of them, which serves for many Uses.

14. Of the Wild Goat.

Pomet. **T**HE wild *Goat* is an Animal little known in *France*, but very common in *Switzerland*; upon which Account I thought it

would not be amiss to relate what *Bellonius* has written of it, of which this is the Substance:
 “ Wolves will not live in the Isle of *Crete*; for
 “ which Reason they leave all their Cattle in the
 “ open Pastures without Fear; and especially their
 “ Sheep and Lambs. When the Inhabitants of
 “ the Country take the Kids of the wild *Goats*, of
 “ which there are great Plenty, they bring them
 “ up with the domestick *Goats*, and so they be-
 “ come the Property of those who tame them;
 “ but the wild ones are theirs who can take or
 “ kill them. They do not exceed the common
 “ Goat in Bulk, but they have no less Flesh upon
 “ them than a large Deer, and they are covered
 “ with the same Sort of Hair, short and thick,
 “ not like the Goats. The Males have a large
 “ brown Beard, which no other stag-haired Crea-
 “ ture has; they become grey with Age, and have
 “ a black List down their Backs. We have
 “ them on our Mountains, and especially on Pre-
 “ cipices that are difficult of Access; one would
 “ wonder to see such a little Animal carry such
 “ a Weight of Horns on his Head; for they are
 “ sometimes four Cubits long. There are two
 “ Sorts of these *Goats*, as I have made appear
 “ from the different Horns brought from *Cyprus*
 “ and *Crete*, which I presented to M. *Le Bailly*.
 “ There are some Peasants on the Tops of the
 “ highest Mountains of *Crete*, that are such
 “ Archers, especially about the Mountains of
 “ *Sphachia* and *Madara*, that they can wound
 “ them with their Arrows five and twenty Paces
 “ distant: And in order to come at them, they
 “ take the She-Goats which they have tamed,
 “ and brought up from young ones, and tie them
 “ in some Passage of the Mountains where the
 “ He-Goats use to go, and lie in wait on the con-
 “ trary Side to the Wind, for fear the wild *Goat*,
 “ who is so exquisite of Smell as to scent you a
 “ hundred Paces, should discover them. The
 “ Male finding the She-Goat on the Way, stops,
 “ and then the Peasant draws his Bow; and if by
 “ chance he wounds him but slightly, though the
 “ Arrow sticks in his Body, he knows how to
 “ cure himself; for he runs to the *Dittany*, which
 “ is an Herb that grows upon the Rocks in *Crete*,
 “ and brouses upon it, by which Means he heals
 “ himself.” The *Switzers* hunt these Animals
 both for eating and for their Blood, which they
 prepare as aforesaid, and use for dissolving the
 Stone, forasmuch as it has greater Virtue than
 the Blood of the common Goat; especially
 when they feed on Saxifrage, or other Herbs of
 like Qualities. It is also esteemed good in Pleurifies;
 the Dose is one Drachm. As to the Choice of it,
 take care that it is genuine, and that is sufficient.

Caper vel Capra, Hircus vel Hirca, the *Lemery*. He or She-Goat, are both the tame and the wild, one or other of which are Inhabitants of most Parts of the World; besides which there are the *Rock Goat*, and the *Oryx*, or the *African wild Goat*. But I shall confine myself here to the wild and tame *Goat*, that feed upon barren Mountains, and waste Places, and eat almost all Sorts of green Things whatsoever; so that they live and grow fat upon what any other living Creature would be starved with. Their Increase is prodigious; for they sometimes bring forth four, and sometimes five at a Time; and the Ewe Kinds will have young ones before they are a Year old. The Profit of keeping *Goats*, which is only proper for barren and hilly Countries, besides the Advantage of keeping the Family, arises from their Hides and Tallow; their Hides being the same Skins which in *Turkey* they make *Turkey Leather* of; and in *Spain*, *Spanish Leather*, and *Cordivant*, so called from *Corduba*. These Skins are so valuable, that in some Countries they go in Tale for Money, as the Cocoa Nuts do in others.

Of what Use the Leather is, daily Observation proves to us. Of the best tanned Leather, which is the *Turkey* and *Spanish*, are made Covers for Chairs, also Shoes and Boots for the Gentry and better Sort of People; of *Cordivant* and Kid Skins are made vast Numbers of Gloves of all Sorts; of the Vellum may be made Covers for Books, Drum-Heads, Deeds, Maps, Books, and other Writings. Theirs is the best Sort of Leather for universal Use, both for Strength, Substance, and Goodness, next to Neats Leather. The Horns and Hoofs of these Creatures abound with a great deal of volatile Salt, Oil, and Spirit, which are equally useful with the Preparations from *Harts-horn*. The Powder of the dried Testicles is boasted by some to be no ways inferior to *Castor*; and being given to a Drachm, cures Fits of the Mother to a Miracle. A volatile Oil drawn from the Brain of the *Goat*, and well rectified, is compared with *Goddard's Drops*, that made such a Noise in the Reign of King *Charles* the Second, and may very likely answer as well, since that Medicine was no more than an exalted volatile Oil, as this is, and so may be ranked in the same Class.

[The Parts of the *Goat* said to be useful in Medicine, are the Blood, Marrow, Suet, Milk, Dung, Urine, Bladder, Caul, Skin, and Gall, to which we may add the Stones generated in the Stomach; but scarce any of these are now ever prescribed or kept in the Shops.

The wild *Goat* is the *Ibex*, *Aldrov. De Quad. Biful. 730. Gesn. De Quad. 303. Hircus ferus*,

Bellon. Obs. Ed. Clus. 20. It is found on the *Alps* and other high Mountains. The Blood of this Creature is esteemed an excellent Medicine in the Stone and Gravel.

Labdanum is a Gum Resin that flows from the *Cistus Ladanifera Cretica vera. Park. Theat. 666. Cistus Ladanifera Cretica flore purpureo. Tour. 19. Cistus a qua Labdanum in Creta colligitur. Bellon. Obs. Lib. i. Cap. 7.* In the Time of *Dioscorides*, it was gathered from the Hair of the Goats which fed among the *Cistus's*; but at present it is gathered from the Shrubs themselves, with a kind of Rakes, with many Thongs of raw Leather, which they gently draw over the Shrubs, and afterwards scrape the *Labdanum* from them with proper Instruments. It is very fragrant, and an admirable Balsamick and Astringent.]

15. Of the Shamoy, or Rock Goat.

UPON our Mountains, and especially on the *Pyrenees*, we meet with a kind of wild *Goat*, called the *Shamoy*, or *Rock Goat*. There is a great Trade carried on with these Skins, by which they convey Oil, Wine, and other Liquids out of the mountainous Countries, and of which they make several other Uses; for these *Shamoy* Skins, being dressed, are made into Gloves, Stockings, Drawers, Breeches, Waistcoats, Caps, &c. because they may be washed as Linen is, and be dyed into what curious Colour you please, as Orange, Lemon, Buff, Black, Green, Red, Blue, or the like.

This *Shamoy* is a very wild Animal, that is not to be met with, but on the very Heights of the Rocks and Mountains; for which Reason the *Latins* call him *Rupicapra*, or the *Rock Goat*, and he mostly feeds upon the Herb we call *Leopard's Bane*. Sometimes we find in the Stomach of these Animals a Stone of different Colours and Sizes, which is called *German Bezoar*, because the *Germans* esteem this not inferior in Virtue to the *Oriental Bezoar*.

The *Shamoy* is of the Size of the common *Goat*: His Horns are small, black, bent forwards, and very sharp; the Tail not above three Inches long. They have large Eyes, and never step but on the Tips of their Toes. They are coated like a Faun, and have a Streak running all along the Back.

Rupicapra, or the *Rock Goat*, is a wild *Goat*, no bigger than the common *Lemery*. Kind, which frequents the Rocks and high Hills; as the *Alps*, *Pyrenees*, &c. The Horns of this Animal are oddly turned, for they rise upright first, and then wind forward like a Hook. They

They feed upon the Plants that grow on the Sands and Tops of the Rocks; the chief of which is the *Doronicum Romanum*. The Male is called in *Latin*, *Dama*, being a very shy and timorous Creature. Both the He and She afford abundance of volatile Salt and Oil. The Liver is proper to stop Fluxes of the Belly; their Blood allays Vertigo's. The Fat is excellent for Ulcers of the Lungs and Phthificks, being taken in Milk. The Gall dries up, and wastes away Films and Cataracts in the Eyes.

[The *Chamois* or *Gemp* is the *Dorcas five Rupicapra*, *Aldrov. De Quad. Bisul.* 725. *Rupicapra*, *Bellon. Obs. Ed. Clus.* 57. *Jonf. De Quad.* 52. The Blood, Liver, Gall, and Dung of this Animal have all their several Virtues ascribed to them, but are none of them ever now used in Medicine. The *Ægragropila*, or *German Bezoar*, found in the Stomach of this Creature, I have already mentioned in the Chapter of *Bezoar*. It is of various Sizes, and sometimes as big as a Walnut. It is said to have very great Virtues, but is seldom seen among us.]

16. Of the Shagreen.

Pomet. **C**HAGRIN in the *French*, or what is called *Shagreen* in *English*, is the Skin of an Animal very common in *Turkey* and *Poland*, which the *Turks* and *Poles* make use of to carry their Baggage, as in other Parts they do Mules, Horses, &c. When this Animal is dead, they take the hinder Part of his Skin, and hang it in the Air, after having strewed it, when raw, with Mustard-seed. They leave the Skins thus exposed to the Weather several Days, then take them in, and tan them, and when they are dressed, export them. This Skin is very hard when dry, and soft when steeped in Water. I have been assured, that that which makes this Skin so hard, is because this Animal sits down and rests upon his Buttocks. They bring two sorts of *Shagreen* from *Turkey*; to wit, the grey, or ash-coloured, which is the best, and the white *Shagreen*, which is dirty, and not nearly so good.

Chuse your *Shagreen Skins* of right *Turkey*, or *Constantinople*, as being much better than those of *Algiers* and *Tripoli*. There come some likewise from *Poland*, which you ought not to meddle with, because they are too dry, and will not take in the Alum when they come to be dyed. Likewise chuse the largest, fairest, and evenest Skins, with a little round Grain well formed, with as few Places altogether smooth as possible; those of a large and uneven Grain being less saleable, though no less fit for Use. The Use of this *Shagreen* is

very universal for all Sorts of Pocket Utensils, Watch-cases, travelling Furniture, and the like. They may dye these Skins of what Colour they please; but the most common are black, green, and red. The most beautiful and dearest is the red Colour, because of the Vermilion and Carmine with which it is dyed. You may know the true *Shagreen* from the *Spanish* Leather made into *Shagreen*, because the last is neither so rough nor so hard; but will wear smooth, which the true will not.

[The *Chagrin*, or *Shagreen* Leather, is the Skin of the Buttocks of the *Onager*. *Raii Synop. Anim.* 63. *Aldrov.* 332. *Jonf. De Quad.* 14. *Onager*, five *Asinus sylvestris*. *Gesn. De Quad.* 21. It differs but very little from the common Ass. No Part of it has been ever used in Medicine.]

Of Bears Grease.

Besides the several Parts of Quadrupeds already described, we sell *Bears Grease* and *Suet*, which are brought from the Mountains of *Switzerland*, *Savoy*, and *Canada*. The Grease, if it be good, ought to be fresh, or new melted, greyish, glaucous, and of a strong ill Smell, of a middle Consistence, that is to say, betwixt hard and soft; and meddle not with that which is white and hard, being mixed with *Suet*. This Fat, or Grease, is a sovereign Remedy for curing cold rheumatick Humours. It is also much valued for easing Pains of the Gout, by rubbing the afflicted Part, and to make the Hair grow; it being esteemed admirable against Baldness, especially when incorporated with Bees in Powder and Nut-Oil. As for the *Bears Suet*, there is but very little of it brought into *France*, it being little used, and that only by those who will not come up to the Price of the Grease. The *Bears Gall* is good in Epilepsies and Asthmas, taken from two to eight Drops. It is also used externally to cleanse old Ulcers.

We sell likewise the Grease of the *Badger*, as very sovereign in nephritick Cases, and Sciatica Pains. And we have also Pencils made of the *Badger's Hair* for the Painter's Use. This Creature is about as big as a Fox, but shorter and thicker; the Skin is hard, rough, and has rugged harsh Hair upon it, of an intermingled grizzled Colour, sometimes whiter, sometimes blacker; the Back almost black, the Belly almost white; the Teeth are very sharp, the Tail short and hairy, of different Colours; it is long-snouted, has short Legs before, yet shorter behind, little Ears, small Eyes, sharp Claws, and is a Beast commonly very fat, and of a strong stinking Smell; the whole

Length of him, from the Snout to the Tip of the Tail, is not above two Feet and a half.

The Liver and Bowels of the *Wolf* dried, are recommended for the Cure of all Diseases arising from the Liver and Bowels, particularly the Cholick; and the Heart of the same Creature is esteemed good in Epilepsies. We also sell the Grease and dried Lungs of the *Fox*. The last esteemed excellent against Coughs, Asthma's, Phthisicks, Wheezings, Hoarseness, Shortness of Breathing, and all other Diseases of the Lungs. The Grease is admirable for the Ear-ach, and to rub the Limbs of such Persons as are subject to Convulsions, Palfies, Tremblings, and Weakness in any Part.

Of the Musk Rat.

There are also the Testicles of a little Creature brought us, called, in the *American Islands*, *Piloris*, or *Musk Rat*, because of its Resemblance to our common Rats, except that the *West-Indian* are much larger. They sell these for *Musk*, to People that do not understand them; but it is an easy Matter to find it out, since these are no longer or thicker than a Child's little Finger. The *Musk Rats*, according to Father *Du Tertre*, have the same Shape with ours, but are so much bigger, that one will out-weigh four of ours: The Hair upon the Belly is white, and that on the Back black; they smell so strong of Musk, that they perfume all the Air about them as they go. The Inhabitants of *Martinico* eat them; but they are forced, after they have skinned them, to leave them one Night in the Air, and then throw away the first Water they are boiled in, to take off the too strong Scent of the Musk. These Rats are natural to the Island, and they had none of the common Kind, 'till of late that they were brought thither by the Ships that trade there.

[The *Bears* Grease is now seldom used, or found genuine among our Druggists, the others scarce at all; and the Testicles of the *Musk Rat*, the *Piloris*, *Lem. Diction. des Drog.* 424. are of no other Use than to adulterate the true Musk with.]

17. Of the Ostrich.

Pomet. THE *Ostrich* is a Bird that has short Wings, and is much valued for its Feathers; which serve as Ornaments for Hats, Caps, Beds, and Canopies of State. The *Ostriches* are taken in *Africa*, and are very common in *Peru*, where they march in Flocks like Cattle: The Natives eat their Flesh, and their Eggs are

good, though hard of Digestion: This is the largest of all Birds, being seven Feet high, and sometimes more. His Head is small, depressed, or flat-crowned, and almost like a Goose's; the Bill is compressed and small, of a triangular Figure, Horn coloured, with a black Tip; it has great Eyes, with a Hazel-coloured *Iris*; the Head and Neck, almost as far as the Breast, are bare of Feathers, as also the Thighs; the Head and Neck are covered with a certain Down, or thin set Hairs: The Sides under the Wings and Thighs are absolutely bare; the Wings are small, and altogether useless for Flying, designed only to assist the Bird in Running. The Feathers of the Back, in the Cock, are Coal black; in the Hen only dusky, and so soft that they resemble a kind of Wool; the Wing-Feathers beneath, are of the same Colour with those in the Back; but above, in their upper Part, they are purely white: The Tail is thick, bushy, and round, not as in other Birds, spread out in Breadth; the Feathers in the Cock being whitish, in the Hen duskyish. Its Neck and Legs are very long; it wants the back Toes, and has but two others; the one Toe is five Inches and a half, and the other eight Inches long, covered with great disjointed annular Scales. It lays very large Eggs, of four or five Inches Diameter, one of which has Meat enough in it to serve seven or eight People, contained in a hard strong Shell, which they cover in the Sands, and forsake, never taking any more Care of them, but leave them to be hatched by the Heat of the Sun.

They have dissected several *Ostriches* in the Academy of Sciences; the largest whereof was seven Feet and an half high from the Ground to the Top of his Head. The Eye is oval like a Man's, having large Eye-brows; and the upper Eye-lid is moveable, contrary to the Generality of Birds, with an Eye-lid within, as a great many Brutes have; the Bill is short and pointed; the Tongue is small and adhering, as that of Fishes; the Thighs large, fleshy, and without Feathers, covered with a white Skin, a little reddish: The Legs are covered with great Scales; the Feet cleft, having only two Toes, with large Claws. The *Ostrich* carries the Quill exactly in the Middle of the Feather, upon which Account the *Egyptians* represented *Justice* by it. When they came to examine the Inside of this Creature, they met with five Diaphragms or Partitions, which divide the Trunk into five Parts; four of which were placed strait up and down; and a fifth situated across, or thwart the Ventricles, which were found full of Herbs, Hay, Barley, Beans, Bones, and Stones, of which there were some of the Biggest.



The Swallow.



The Frigate.

Girick

17

The Swan

The Eagle.

18

The Eagle

The Vulture

Cantharides

22



ness of a Hen's Egg. They found in one seventy Pieces of Money; the most Part of which was wasted and gone, and that apparently by their mutual Attrition one against the other, rather than by Corrosion. It is observable, that the *Ostriches* swallow Iron for the same End that Birds do Pebbles and Gravel, to help them to grind their Food, and not nourish them, or to digest it, as the Antients believed, for they perish if they swallow too much of it.

The Flesh of the *Ostrich* is fat, and said to cause an Appetite, and restore in Consumptions. The Ventricle, or Skin of the Stomach, strengthens and assists Digestion. The Fat is hotter than Goose Grease, and may be used with great Advantage to dissolve hard Swellings, relax contracted Nerves, and ease Pain. Besides the *African Ostrich*, already described, there are three other Sorts, to wit, the *American*, the *Emeu* or *Cassowary*, and the *Dode*.

The *American Ostriches* are somewhat less than the former. Their Legs are long, and they have three Toes on each Foot, one of which stands backwards. The Head is like that of a Goose, the Neck twenty-four Inches long, which they carry bended like a Swan or Stork; the Bill is compressed, or flat, but not very broad, two Inches and a half long; the Wings small, and not fit for flying, which they only assist themselves with in Running, which they do with that Speed, that a Grey-hound can scarcely overtake them. The whole Body is covered with grey Feathers, which are longer and more beautiful on the Back. The Tail is like that of the former, but stretched long-ways. It feeds on Fruit and Flesh, but will swallow any thing you offer it. The Flesh is reckoned among the *Spaniards* as good Food.

The *Emeu*, or *Cassowary Ostrich*, has a horny Crown on the Top of its Head, near three Inches high, of a dusky yellow Colour, which is reported to fall off at moulting Time, and to grow again with the new Feathers. The Head and Neck are bare, or only covered with a hairy Down; the Skin being of a purplish blue Colour. In the fore Part of the Neck hang down two membranous Wattles, or Lobes of Flesh, two Inches long, of a Vermilion Red; as is also the lower Part of the back Side of the Neck: Its Bill is of a moderate Thickness, and straight, and four or five Inches in Length; the Neck is about thirteen Inches long; the Length of its Body, from Breast to Rump, three Feet, the Breadth two Feet over; the Thighs, with the Legs to the Feet, are seventeen Inches long; the Legs are thick and strong, and almost five Inches about,

covered as it were with broad Scales. It has thick, hard Feet, divided into three thick Toes, all standing forwards, and wanting a back Toe, having very great Claws, almost two Inches long. It has some Rudiments of Wings, consisting only of five naked Shafts of Feathers, somewhat like *Porcupines Quills*, which commonly lie hid under the Feathers, covering the Sides; but it has no Tail. The Feathers covering the whole Body are all double; two coming out of the same Pipe or Stem, the upper somewhat the thicker, or grosser, the lower the finer and more delicate. It is commonly said to want a Tongue, because the Tongue cleaves to the Mouth as in Fishes. It feeds upon Fruits, Flesh, Bread, Hen's Eggs, Oranges, and almost any Thing that is offered it. Its Eggs are great and fair; one being measured length-ways, was fifteen Inches, and cross-ways twelve Inches, or more; of a greenish ash Colour, thick set with small Protuberances of a deep Green.

The *Dode*, called *Gallus Gallinaceus*, is said to be of a middle Size, between an *Ostrich* and a *Turkey*, agreeing much with the *African Ostrich*, if you consider its Rump, Wings, and Feathers; but in regard of the Shortness of its Legs, it looks like a Pigmy among them. It has a great Head, covered with a Membrane resembling a Hood, great black Eyes, prominent fat Neck, a Bill long and strong, not flat and broad, but thick and of a bluish White, sharp pointed and crooked. Its Body is fat and round; covered with soft grey Feathers, much like an *Ostrich's*; on each Side, instead of hard Wing-Feathers, or Quills, it has small soft-feathered Wings, of a yellowish ash Colour; and for a Tail, it has five small curled Feathers of the same Colour. It has yellow Legs, being about four Inches in Compass, and something more than four Inches in Length, covered with thick Scales. It has three fore Toes, and one back Toe, near an Inch and an half long, and its Claw above an Inch in Length. It is a slow-paced, stupid Bird, and easily taken. The Flesh, especially of the Breast, is fat, esculent, and has so much of it, that three or four of them will sometimes be enough for a hundred Men; but it is commonly salted, and stored up for Sea Provisions. It swallows Stones, and such like hard Substances, which shews it to be of the *Ostrich* Kind.

[The *Ostrich*, whose Fat is esteemed so excellent in nervous Cases, is the common Kind, the *Struthio*. *Charl. Ex. 79. Struthio camelus. Raii Ornith. 144. Gesn. De Avib. 672.* The Fat, by the Relation of those who have been where it was to be had, and tried it, is one of the greatest of Medicines used as an Ointment in Contractions of the Nerves, but

but whether this be true or not, is of little Consequence to us who cannot expect often to meet with it.]

18. Of the Eagle.

Pomet. **T**HE *Eagle* is a large Bird of Prey, and the fiercest and strongest of that Kind, being scarce distinguishable from the *Hawk*, but only in Bigness, or from the *Vulture*, but by its long, black, and crooked Bill; besides which its Legs are yellow, and covered with Scales. This Bird is very well known in *Europe*, as well as other Parts of the World. There are several different Species however of it; as the *Golden Eagle*, the *Black Eagle*, the *White tailed Eagle*, the *Brazilian Eagle*, the *Sea Eagle*, and the *Vulterine*.

The Flesh of all the Kinds is hard, fibrous, and not fit for Meat or Physick. The Brain is said to cure the Epilepsy, the Testicles to procure Lust, and the Gall is the strongest of all Galls, and helps all the Diseases of the Eyes whatsoever; as Clouds, Mists, Films, Pearls, Blood-shot, Ulcers, &c. The Fume of the Dung is said to bring forth the *Fætus*, and outwardly applied, ripens Tumors and Aposthumes. The *Eagle* is a very salacious Bird, yet lives to a very great Age. But of all that belongs to this Bird, there is nothing sold in the Shops, but a kind of Stone that is found at the Entrance of the Holes where the *Eagles* build their Nests, supposed laid there to preserve their Young from Lightnings, and other Injuries of the Weather. This Stone is brought us by the Pilgrims of *St. James* in *Galicia*. The *Eagle* Stones most esteemed, are those which are flat, blackish, and that rattle well; that is to say, which make a Noise when shaken at your Ear, which proceeds from a little Stone contained within. Great Virtues are assigned to this Stone, especially to procure easy and safe Labour, and to prevent Miscarriages. Some write, that the *Eagle* hunts for this Stone to the very *Indies*, in order to hatch, or bring forth its young ones.

[The two Kinds of the *Eagle*, which have Places in the Catalogues of Birds used in Medicine, are the *Aquila fulva, sive aurea*. Will. Orn. 58. *Aquila Germana*. Gesn. De Avibus, 149. *Aquila regalis*, Schw. A. 214. The *Golden Eagle*, and the *Halicætus*. Jons. De Av. 93. *Halicætus sive Aquila Marina*. Will. Orn. 29. *Halicætus sive Ossifraga*. Raii Syn. An. 6. The *Osprey*. The Gall of the first is said to be good in Deafness; and the Marrow of the Thighs of the other to make Baits for Fish: But neither are ever used now.

The *Eagle* Stone is the *Ætites sive Aquilinus Lapis*, Worm. 77. Charl. Fossil. 31. Its Virtues seem altogether imaginary. There are several

Kinds of it: The *Ochreoferreus Ætites*, the *Bastard Eagle Stone*, the *Geodes*. Woodw. Att. 2. 9. Boet. 381. and the *Terra Sicula, Bezoardicum minerale*. Mont. 14. which are ferrugineous Bodies containing Earth, &c. The true *Ætites* is a Pebble with a loose Nucleus.]

19. Of the Vulture.

THE *Vulture* is a Bird of Prey that *Pomet.* is much like an *Eagle*, and has so quick a Scent, that it will smell a dead Carcase many Miles. Many are of Opinion that he differs not in Kind from the *Eagle*, but only in some other Characteristicks, as that the Head and Neck of the *Vulture* are for the most part bare of Feathers, and are only covered with a short white Down; that a little under their Throats they have about a Hand's Breadth covered rather with Hairs, like those of a Calf, than Feathers; that the *Crow* hangs down like a Bag before the Stomach or Breast; that the Bill being straight for two Inches, does then grow crooked; that among all rapacious Birds, none fly together in Flocks but the *Vultures*; and lastly, that the Insides of the Wings are covered with a soft Fleece of Down, which is proper only to the *Vulture*.

There are several Kinds of *Vultures* described by Authors, as the Ash-coloured, the Black, the Chestnut, the *Hare Vulture*, the *Golden*, the *White*, the *Brazilian*, and the *Vulturine Eagle*. The two first differ in nothing but their Colour. The Chestnut-coloured is less than an *Eagle*, having the whole Plumage of its Body of the Chestnut Colour; the Feathers of the Crown are very short if compared to *Eagles*, which is the Reason some have thought them bald. The *Hare Vulture* is so called from its preying upon Hares; is inferior in Magnitude, and has not a Breast so refulgent as the *Golden Vulture*, which has many Things in common with the *Golden Eagle*, but is every Way, or in all its Parts greater. The *Brazilian Eagle* is a rapacious Bird, of the Bigness of a *Kite*, having a long Tail, and Wings longer than it. The whole Plumage of the Body is black, with a little Tawny here and there mixed. It is headed almost like a *Turkey*, having a wrinkled Skin. Its Bill is long, hooked at the End, and sharp; in the Middle whereof is one large Hole for the Nostrils, transversely situate; its Eyes are almost of a Ruby Colour, with a round black Pupil. Its Flesh stinks like Carrion, for it feeds chiefly upon dead Carcasses; it is ill-looking, always lean, and never satisfied.

The *Vulturine Eagle*, though called so by the Naturalists, has nothing of the *Eagle* in him; its Shape is unusual; the Bill is straight almost to the Middle,

Middle, and towards the Point bent into a remarkable Hook, after the Manner of *Vultures*, white towards the Head, the rest of it black, the lower Chap wholly white. The *Iris* of the Eye is not so fiery as in Eagles, but whitish, and the *Pupilla* black; the whole Head whitish or grey; the Neck, half way from the Head, almost bald, set with a few white Feathers, and some small ones, like rough curled Hairs, higher than the rest of the Plumage, as if they were fine long Bristles; on the Back there is as it were a kind of Hood, reaching to the Middle thereof, and ending in a sharp Peak, resembling a Triangle. The Colour of the whole Plumage is of a dark Chestnut, inclining to black. The Fat is the only Thing belonging to the Vulture Kind that is sold in the Shops: It is used to anoint with in Palsies and other nervous Cases.

[The *Vulture*, that has a Place in the Catalogues of medicinal Birds, is the *Vultur niger*. *Aldr. Ornith.* 1. 271. *Vultur nigricans*. *Char. Ex.* 71. The Flesh, Fat, Gall, Brain, and Dung of this Bird are recommended as having their several Virtues, but none of them are ever seen in the Shops, or prescribed in the present Practice.]

20. Of the Frigat.

Pomet. **T**HE *Frigat* is a Bird which the *Indians* call so because of the Swift-ness of its Flight. The Body of this Bird is no bigger than a Pullet's, but its Stomach is very fleshy. All the Feathers of the Males are as black as Ravens. The Neck is pretty long, the Head small, with two great black Eyes, and the Sight more piercing than the Eagle's. The Bill is pretty thick, and altogether black, about six or seven Inches long, and straight to the End, where the upper Beak is crooked like a Hook: The Claws are very short, being divided into two, as the *Vulture's*, but are entirely black. The Wings are so prodigiously great, that it is seven or eight Feet from the Extremity of one Wing to the other, and that not without Reason, since his Wings are sometimes employed to carry him above three hundred Leagues from Land. It is with a great deal of Trouble that this Bird can raise himself, but when he has once taken his Flight, he keeps his Wings extended almost without any Motion or Fatigue. If the Weight of the Rain, or the Impetuosity of the Winds force him, he mounts above the Clouds, and soars beyond Sight into the middle Region of the Air; and when he is at the highest, clearly distinguishes where the *Dorado* gives chase to the Flying-Fish, and throws himself down like Lightning; not so as to strike upon

the Water, for then it would be difficult for him to rise again; but when he comes within twelve or fourteen Paces, he makes a large Turn, and lowers himself as it were insensibly, 'till he comes to skim the Waters where the Chace is given; in passing he takes the little Fish in its Flight along the Water, either with his Bill or his Talons, and sometimes both together.

The Male carries a great red Comb, like that of the Cock, not upon his Head, but under the Throat; and this Comb does not appear but in the old ones. The Females have none, but they have Feathers that are whiter, especially under the Belly. As the *Hérons* in *Europe* have Heronries, which are certain remote Corners of Woods, to which they retire, as Places of Refuge, where they meet, roost, preserve themselves, and multiply; so these Birds, for a long Time, made a little Island, near *Guadouloupa*, their Habitation; where all of that Species thereabout come to roost at Nights, and build their Nests in the proper Season. This little Island was called the *Isle of Frigats*, and bears the Name to this Day, though the Birds have left the Place; for in the Years 1643 and 1644, several People chased them so severely, that they were forced to abandon the Isle.

The Reverend Father *Du Tertre*, Apostolical Missionary in the *Antilles*, moved by the large Commendations given to the Oil drawn from these Creatures, by Means of two or three People, took more than an Hundred of them in less than two Hours Time. They surprized the large ones upon the Branches, or in their Nests; and as they rise with a great deal of Trouble to take Wing, it was an easy Matter to beat them down with long Sticks. There was not one of these, says this Author, that flew away, but at taking Wing vomited two or three Fish, as big as Herrings, half wasted: He believes they discharged themselves in order to fly away with the more Ease. The Oil or Fat of these Creatures is a sovereign Remedy for *Sciatica* Pains, and for all others proceeding from a cold Cause. It is held in great Esteem throughout all the *Indies*, as a precious Medicine.

[The Oil so much commended here, is obtained from a large Bird, called the *Man of War Bird*, common in many of the *American* Islands, but has never been of fame enough among us to get into use, or make it worth any one's while to import it.]

21. Of Birds Nests.

THE Birds Nests which the People *Pomet.* of *Siam* have brought into *France* for

many

many Years, are nothing but an Excrement or Foam of the Mouth, of certain Birds called *King's Fishers*, which are very common in *France*, especially in *Normandy*. The *King Fishers* of *France* frequent the Sea Coast, Rivers, and watry Places; they are of the Size of a Swallow, or of a Quail; their Feathers and their Bills are of various Colours, as green, red, and blue; and they have a great many several Names; as the *Alcyon Martin*, the *Martin-Fisher*, the *Martlet*, the *Bird of St. Martin*, &c. These Animals usually build their Nests among Reeds, or upon Rocks. The *Indian King-Fishers*, especially those about the Kingdom of *Camba*, when they are going to breed, throw out of their Bills a white Froth, with which they build a Nest, of the Bigness and Shape of a Cup, where they lay their Eggs, and hatch their young ones: These Nests are of a white Colour, tending to yellow, and of a hard dry Consistence; the Taste being insipid, and almost like that of *Vermicelli*.

The *Chinese* are such Lovers of these Birds Nests, that it is almost incredible what Quantities are sent to *Pequin*, the Capital of *China*. They are usually valued at fifty *Tabers* the hundred, which is about six hundred *Livres*, or fifty Pounds of our Money. They assign mighty Virtues to this Nest; as that it nourishes extremely, being boiled in Water with a Fowl and Ginger; they reckon it very good for curing Pains at the Stomach, and for restoring those that are in a languishing Condition. These Nests were formerly little known; and it was believed that they were made of the Froth of the Sea; but since the People of *Siam* have brought them us, they are become very common. There are, besides, other Parts belonging to Birds, which we sell, and have a considerable Trade in; as Quills, Pencils, and Down from the Swans, Geese, and other Fowl, which are brought us from *Gascoigny*, *Normandy*, &c. as also the Swallow Stones, which are little Stones used like those taken out of Cray-Fish; and to take out any Filth or Dirt that falls into the Eyes.

[The *Chinese* Birds Nests are the Nests of the *Indian Swallow*, the *Hirundo Maritima*. *Aët. Phil. Lond. N° 285. Hirundo Sinensis, Nido Edulo Bontii. Will. Orn. 15. Hirundo Chinensis. Bont. 66.* The Nests are of the Bigness of a Goose's Egg, roundish and pellucid, of a Substance resembling Gum Tragacanth or Icthyocolla. They are found on the Rocks upon the Coasts of *China* and *Japan*. When mixed in Broth or warm Milk, they swell and make a thick Soup, much esteemed in the *East*, as a Restorative, and Provocative to Venery, as well as an excellent Food.

The Swallow Stones are the *Lapis Chelidonium. Worm. Mus. 72. Bufonites minor Castanei subfusci*

coloris. Luid. Lith. p. 70. Teeth of the *Lupus Piscis, Woodw. Att. 2. 27.* They are about the Bigness of a small Pea, and said to be found in the Stomachs of young Swallows, but are really dug out of the Earth in the Isle of *Malta*, and are the Teeth of a Fish buried there.

They are hung about the Arms or Necks of Children, as a Remedy for the Epilepsy.]

22. Of Cantharides.

THE *Cantharides* are Flies which the *Pomet.* Peasants about *Paris* bring us, and which they find in great Plenty upon *Ash-Trees*, *Rose-Bushes*, and on the Blades of Corn. The Wings of these Flies are of a fine shining Green to look upon, because of their blue Colour mixed with a gold yellow; but the whole is venomous, and of a foetid Smell. They have a large Sort in *Italy*, but they are of no Use. Chuse such as are new, dry, and whole, without being crumbled to Powder.

The Use of *Cantharides*, at this Day, is chiefly external; but there are some Countries where they are frequently given inwardly, by such as understand how to prevent their dangerous Effects. They are of very great Service to the Apothecary, not only for the Blistering Plaister, that is always ready compounded by them, but to use fresh upon all Occasions where they are required. They kill the *Cantharides* with the hot Fumes of the sharpest Vinegar, enclosing them in an earthen Vessel, having its Mouth covered with a fine thin Cloth; afterwards they dry them, and putting them up in wooden Boxes, they keep them for the Space of two or three Years. These *Cantharides*, tho' rarely prescribed inwardly, are very efficacious in the Hands of a wise Physician who knows how to correct them, and make them specific, in a *Gonorrhœa*, Suppression of Urine, Ulcers of the Bladder, Stone, Gravel, &c. They are most frequently administered in a Tincture mixed with Spirit of Wine, Camphire, &c. But to promote the Expulsion of Urine, nothing can be more safe than the anointing the *Perinæum*, or lower Part of the Belly, and the Region of the Navel, with the Oil, wherein *Cantharides* have been boiled.

Some at this Time use all the Parts of the *Cantharides* promiscuously; but the Head, Wings, and Legs, are to be cast away. If a Blistering Plaister made of them be applied to a tender delicate Body, or upon fine skinned Women, it will cause a Strangury, or Scalding, and Heat of Urine, which is easily remedied by drinking of Milk, Barley-Water, or Emulsions of Almonds, or the cold Seeds. The volatile Salt of the *Cantharides*



A Rose of Babel

A Man with a Tambourine

A Dog

A Fruit

is one of the most powerful Diureticks that is to be met with in the World; so that some Authors affirm it is able to break or dissolve the Stone. It is so pungent and biting, that it is apt to raise little Blisters upon the Tongue, when tasted; so that it is not to be taken alone, but in some smooth oily Substance, or other proper Vehicle: Dose from one Grain to three. The Tincture is more gentle, and less hazardous than the *Cantharides* themselves.

[*Spanish Flies*, as they are commonly called, are the *Cantharides*, *Mouff. Inf.* 144. *Cantharides Dioscoridis. Charlt. Ex.* 47. *Cantharides vulgares officinarum. Raii Inf.* 101. Their principal Use is in blistering Plaisters, but there are some who give them inwardly with great Success; one of the first of these was Dr. *Groenvelde*, a Dutch Physician, who practised in *London*, and after a successful Use of them for many Years, was benevolent enough to communicate what he had learnt of them to the World, in a Book entitled *De tuto Cantharidum Ufu interno*, in which he gave the Method by which he always prevented their ill Effects. The Thanks he received for this were, the being thrown into a Prison. However, there have not been wanting, both at that Time and ever since, Persons of Judgment, who have had Courage enough to try and reap the Advantage of the Discoveries he paid so severely for communicating.]

23. Of Bees.

Pomet. **T**HE *Bees*, or *Honey-Flies*, are little Insects, the Nature and Conduct of which is no less wonderful, than their Labour is necessary and useful, since they furnish us with Honey and Wax; both which are very considerable Commodities. But as I never kept *Bees* myself, I have been obliged to have Recourse to a Friend, who communicated to me what, by many Years Experience, he had observed concerning them, that I might compare it with what had been said by others upon that Subject.

Some Naturalists will have it, that the Origin of *Bees* comes from the dead Lion and the Ox; and that instead of Worms that usually breed in the Bodies of other Animals, the *Bees* generate in the Bodies of these Creatures. This Extraction appears to me to be very wide of Truth, from an Experiment made by a certain Person of what *Virgil* says in his fourth *Bucolick*, which he found altogether false. The Fact is related in a little Tract supposed to be writ by a Country Clergyman, who says thus:

“ *Virgil* appeared to me to be an Author of
“ Solidity enough to ground a probable Opinion
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“ upon, and whose Credit was sufficient to in-
“ duce me to make a Trial, which I unluckily
“ did, and thought I had poisoned the whole Vil-
“ lage; for I caused to be strangled a young
“ Bull, *Bina cornua ferens*, giving him a thousand
“ Strokes with a Cudgel as he was dying, which
“ was more than I could warrant from the Poet:
“ for his Burial, I took the bruised Members,
“ with the two Horns, and put them into a great
“ wooden Tub, with four little Windows open to
“ the four Quarters of the Wind in order, as
“ *Virgil* says, to produce Thousands of *Bees*.
“ The King is said to be bred from the Brain, the
“ working *Bees* from the Stomach, and the Drones
“ from the Guts: the King makes War upon
“ his neighbouring States, both by Sea and Land;
“ he marshals his Army in *Battallia*; he rewards
“ his Captains, and Generals; he punishes the
“ Cowards with Death, and makes the Rogues
“ and Deserters run the Gantlet; besides a Thou-
“ sand old Womens Tales, which several People
“ relate, and believe to this Day. But instead
“ of the Swarms of *Bees*, which I expected from
“ the Body of this Animal, there were Thousands
“ of Maggots produced, with an insufferable
“ Stench, that I thought would have infected all
“ the Neighbourhood: And the Stink was so great,
“ that all the Country fancied they were threatened
“ with the Plague” You may see from hence how
false common Opinions are. And as I am not a ca-
pable Judge, I shall content myself to make some
Observations, founded upon Experience, as you
will find in the following Relations; and those
who desire to be instructed further, must consult
the best Authors who have writ upon this Subject.

*Observations upon Bees, according to an Account
delivered me by an understanding Person.*

The Production of *Bees*, at first, is, that they breed from a Kind of little white *Germen* or *Sperm*, that is posited at the Bottom of the small Holes or Sockets, that make up the Honey-Comb, which the *Bees* make in their Hives, and which they begin at the End of the Hive. This *Sperm*, assisted by the natural Heat of the *Bees*, encreases and becomes a Kind of white Maggot, which at the beginning of its Formation, has no Resemblance of the *Bee*, but in a Month's Time it becomes like one, but of the same Colour with the Maggot, and after continuing so a little while, it grows darker coloured, and comes out of the Socket. The *Bees* generate from *February* to the End of *October*, if the Hive be in good Condition: they swarm in *May* and *June*; but the *May* Swarms are more valued, because
G they

they are stronger than those that are later; because the Season is more favourable, and the Heat more temperate; whereas the Swarms of *June* cannot be so successful, by reason they are usually attacked with too much Heat and Dryness at first; so that they can neither supply themselves sufficiently with Provisions for their present Occasions, nor lay up Stores for Winter.

How the Bees work their Honey.

This I have observed with particular Care and extraordinary Application, having spent a great deal of Time, watching the Hives every Hour of the Day, to satisfy my Curiosity in seeing the *Bees* work, having provided them Glass Hives for the Purpose. Towards the End of the Winter, as soon as it is gentle Weather, and the Air begins to free itself of the great Coldness; in the Month of *February*, the *Bees* venture out of their Hives, range the Fields, and bring home Wax of different Colours; as white, yellow, Lemon coloured or red, which sticks, like little Lentils, on the hinder Parts of their Thighs; and which, when entered into the Hives, they industriously quit themselves of, and form with it their Holes or Lodgments, which they compose of six Sides, thinner and finer than Talc, and almost as transparent. It is observable, that the same Hollows, or Sockets, are the Places wherein they deposit their Sperms, whence are generated the other *Bees*, and which are filled with Honey, as they become empty by the Production of the young *Bees* which they enclose. They collect their Honey-Comb, or Wax, from all Sorts of Flowers, as the Rose, the Orange, the Pease Bloom, and the Daisy Flowers.

They bring, beside the common Wax, a purplish kind firmer than the yellow, and serving them to stop the Holes and Cracks about their Hives: this Wax is of a strong Smell, and very different from the common Kind.

Of the Manner how the Bees gather their Honey, and the most proper Times to take it.

The best Season of the Year for the *Bees* to gather their Honey, is towards the latter End of *April* and in *May*, at which Times they go out by break of Day, when the Air is gentle and serene, and gather the Dew, which is more plentiful and common at that Time than any other of the Year: They return as quick as they can into their Hives, to discharge into the Holes assigned them, the Honey-Dew they have gathered from the Simples of the Field, and which they have sucked into their Bodies, and throw it up again, as Pigeons

do their Food wherewith they feed their Young: And when they have filled a Hole or Socket with this Honey, they close and seal it up with a small Piece of Wax, to prevent it from flowing out again.

Towards the End of *June* and *July*, when the Dews are not so plentiful as during the Months of *April* and *May*, it happens still there are some dewy Mornings in which the *Bees* are not less industrious than at other Times, to make their Harvest: and likewise it falls out sometimes that the Fruits of the Earth, as the Corn and the like, are damaged by certain cold drizzling Rains, which are however favourable for the *Bees*, giving them further time to make their Harvest.

It is observable, that when they swarm, and that the young ones which compose the Swarm are come out of the Hive, they make as it were a Cloud of Flies in the Air, that looks black, and is formed, as they march out, into Squadrons and Battalions, like an Army. They follow close their Leader, or the Principal amongst them, who is much longer than the others, and whose Wings are much shorter, and who is of a reddish Colour. When they lose their Leader, they become Vagabonds, and this is a certain Loss to the Proprietor. When the Swarm are got out, they usually assemble together, and lodge upon some shady Branch, rather than in any other Place; and being there closely knit, it is then proper to hive them, for fear they should desert; for should they stay long till the Sun shines upon them, they will then separate and fly away. When they are hived it is proper to set them in the Shade from the Heat of the Sun, which might melt their new Wax.

It is also to be observed, that the *Bees* Wax, for three Years together, is very plentifully productive in breeding of the *Bees*; and that the Age of the Honey-Comb is very easy to be known by its Colour; for the first Year it is whitish, the second it is yellow, and the third brown; but when older it turns black, is barren, and without Production, and then the *Bees* cease to make Honey, and breed any more Swarms.

I have Hives made of two Pieces, in Form of a Barrel, or Sugar Loaf, cut in the Middle; so that I need not destroy the *Bees*; and I take the Honey of these Hives from Year to Year, by lifting up one Year one Part, and the following Year another, according as they are found full, and instead of those that are full of Honey I put empty ones. One very remarkable Thing is this, that *Bees* delight much near Water, and watry Places, using a great deal of it in assisting them to make Honey. I have been informed of this by several of my Friends, and particularly by an Officer of the King, who having *Bees* in a Garden at Argon-
twill,

teüil, where there was a Fish-Pond, the *Bees* used to go, and come constantly to take up Water to carry to their Hives; upon which I asked him, what he thought of it? And he told me, that it was a Thing he had always observed since he kept *Bees*.

Care must be taken not to have any Space or open Hole in the Top or Bottom of the Hive; for in *July* and *August* a kind of Butterflies breed and enter the Hives, and engender large, short, hard Maggots, which make a kind of Webs like those of Spiders, which joining the Combs together, produce a Heat, so that in two or three Days the *Bees* will be gone, and quite forsake it, after having pillaged it. These Maggots, tho' but few at first, will multiply so, that in less than five or six Days they will not leave one Ounce of the Honey-Comb behind, but instead of it leave their Eggs; which together with the Webs that are formed, fill up the Whole of the Hive.

It is further observable, that amongst the *Bees* there are Drones which will not go into the Fields at all; or if they do, which is not but from Noon till about four a-Clock, they bring nothing Home with them, but on the contrary eat the Honey made by others; and the industrious *Bees* kill the Drones, which are much larger and blacker than the others, and have no Stings; but when you press their Tails there appear two little Horns like transparent Skins, which are yellow at the End. In *Poland* and *Muscovy* the *Bees* make their Hives in the Trunks of old Trees, and afford Plenty of Honey, on which the Peasants almost live, without any Assistance, which is contrary to the Nature of ours. Upon this, *Munster* and *Guyon* relate a surprizing Thing: A certain Peasant falling into one of these Trees where the *Bees* made Honey, in a large Forest in *Muscovy*, as he was searching for the Honey-Comb, and not being able to get out because the Hollow of the Tree was too deep and wide, a Bear providentially coming to this Place to seek for Honey, the Peasant immediately caught the Bear by the Paw, and was drawn out from the certain Danger he was in of perishing in the Tree.

Apis, or the *Bee*, is a Sort of Fly that *Lemery*. makes Honey and Wax, and is supposed to take its Name from being a Fly without Feet, which is not so in Fact, for it has Feet, but carries them close to its Belly. It has four Wings; the Tongue is long, which it carries usually out of the Mouth; it has small Teeth, and the Sting cleaves to the Belly. The Antients pretended, that the *Bee* was generated from the Lion or the Bull; but the vain Trials several have made are sufficient to confute such a Notion, as

being no other than the Fancy of the Poet. Indeed we read in the Holy Scripture, that *Samson* found in the Carcass of a Lion, that had been killed some Days before, a Swarm of *Bees* and Honey; but they were never generated from the Flesh of the Lion.

The Origin of them is certainly the same as that of other Flies, but only their Production is slower; yet from the white Maggot they become a perfect *Bee* in a Month's Time. The large *Bee*, which they call the King, because of the others that attend and follow him, is a Male *Bee* that is capable of impregnating a great many Females, after the same Manner as one Bull does all the Cows of a Village. This *Bee* is much larger than the rest, but he has shorter Wings. His Colour is reddish, instead of being brown, as all the others are. The *Bee* sucks the Virtue of the Flowers, and receives it into her Pouch or Throat, from whence she disgorges it into the Hive, in order to work it up to Honey; she carries also the Wax sticking to her Thighs. The whole Insect yields a great deal of volatile Salt and Oil. They are proper, being dried, to make the Hair grow. Being reduced to Powder, and mixed with Oil of Lizards, they make a kind of Liniment wherewith they rub the Head. The essential Salt of them is so volatile, that it is difficult to keep it in a dry Form. It is a most subtle and penetrating Thing, and one of the most powerful of Diureticks and Diaphoreticks.

24. Of Honey.

WE have three Kinds of Honey in *Pomet*. *France* brought from several Parts, viz. *White Honey*, which is made without Fire, which some call *Virgin Honey*, as well because it flows of itself, without pressing, as because it is made from the first Year's Honey-Comb. The second sort is made of all kinds of Honey-Combs put together (after being well cleansed) into a Bag, from whence by the help of pressing there flows a white Honey, but very different from the former; not only because it is not of so fine a white, but because the Taste is not so agreeable. The third is the *Yellow Honey*, which is made from the Combs put over the Fire in a Kettle, with a little Water, and then put into Bags, and squeezed. The *Yellow Honey* is more or less fine, according to the Degree of Heat it receives; for if it be too much heated, instead of being a fine Yellow, it will be brown, and of an ill Smell. They say likewise, that the Honey is more or less beautiful and good, according to the Quantity of Water which is used to heat it.

The finest and most esteemed *Honey*, is that of *Languedoc*, which is white; especially that of *Corbiere*, a little Borough about three Leagues beyond *Narbonne*, which is the Place from whence comes the whitest and purest *Honey*, commonly called *Narbonne Honey*, tho' falsely so; for at *Narbonne* they do not know what you mean by *Narbonne Honey*, but are very well acquainted with that of *Corbiere*: the Name has been given to it, because *Narbonne* is a great City, and much better known than *Corbiere*, which is but a small Place. This true *Honey*, to have its proper Qualities, ought to be new, thick, candied, and entirely like Sugar-Royal, of a sweet piquant Taste, and a little aromack. Next after this is that of other Parts of *Languedoc* and *Provence*, but very much different and inferior to that of *Corbiere*; not only because it is never so white, but because it is not so pleasant to the Taste or Smell, and has not the Rosemary Smell of the other, unless it is given it by Artifice. The third and last Sort is the white *Honey* about *Paris*, of the Country for twenty or thirty Leagues round, which gives it the Name of *Country Honey*; this is met with sometimes so good, that, except in Smell, it is scarce inferior to that of *Corbiere*; that the *Narbonne Honey* must excel in these, may be readily granted, because the Taste and Scent of *Honey* proceeds from the Plenty and Goodness of the Flowers with which the *Bees* are fed. And as *Languedoc* and *Provence* are warm Countries, and consequently full of aromackal Herbs and Flowers, as Thyme, Rosemary, Stœchas, &c. therefore the *Hney* is better, and of a more pleasant Smell, and more bought up, especially to make pectoral Pilsans of, which is its chief Use; the Country *Honey* being principally employed in the great Compositions, and to eat in *Lent*.

As to the yellow *Honey*, the best that comes to *Paris*, and the most set by, is that of *Champagne*, which to be good, should be fresh or new, of a good Body, of a golden Yellow, the most candied, and least full of Wax that may be; the Fault otherwise proceeds from the ill making of it; but the true *Champagne* is of much the best Sale, and of more Virtue than all the Honeys brought from several other Parts, as *Tourain*, *Picardy*, and especially *Normandy*, which is ill-scented, reddish, and of a very bad Sale, tho' it is more purgative than that of other Parts. This *Honey* is very easily known, both by the Colour and Smell; and likewise because it usually comes in Stone Pots, such as Butter comes in from *Normandy*. This *Honey*, tho' not so fine as the others, is yet very proper for the Apothecaries to make *Honey of Roses*, *Violets*, or the like. There are several

other Ends this *Honey* serves for; as to distil into a Water, Spirit, or Oil, which are reckoned proper to make the Hair grow, and to take out Marks, Spots, or Freckles in the Face. Some likewise assign to the Spirit of *Honey*, well rectified, the Power of dissolving Gold or Lead.

Mel, or *Honey*, is a compounded Body *Lemery*. of divers Parts of Flowers, which the *Bee* extracts, and receives into her Stomach to carry to the *Hive*, where she disgorges herself, and fills her Cell which she has made in the Honey-Comb before for that Purpose. There are two Sorts of *Honey* in general; one white, and the other yellow: The white is made of the first Year's Stock, without Fire or Pressing, which is called *Virgin-Honey*; and the second is pressed from the Wax, with Force, and by the Addition of Heat. The white *Honey* is finer, and more pleasant for the Palate, and consequently better for internal Uses. The yellow has a little more Acrimony than the white, and therefore is more laxative, and externally a good Deterfise. Raw *Honey* is apt to gripe and swell the Belly, but being clarified, it opens, cleanses, nourishes, and restores in Consumptions; is pectoral, diuretick, and one of the best Ophthalmicks in the World.

The several Preparations made of *Honey*, and commonly sold, are, Clarified *Honey*; the Spirit, Oil, and Water, the Tincture, and Vinegar, with Mead, Metheglin, and Hydromel. Clarified *Honey* is made with the Whites of Eggs; the Water, by putting *Hney* into a large Glass, or earthen Body, and distilling in Sand with a gentle Heat, until acid Drops begin to come; then cease the Fire, and keep the Water for Use. To make the Spirit and Oil, take what remains in the Retort foregoing, and put it into an earthen one, or glass one coated; but let it be so large, that two thirds of it may be empty: Place your Retort in a reverberatory Furnace, with a large Receiver, luting the Juncture; begin the Distillation with a small Fire, for about three Hours, to warm the Retort; then increase it by little and little, so will the Spirits come forth, with a little black Oil, and fill the Receiver with Clouds; continue the Fire till all is come over, then separate the Spirit from the black stinking Oil by Filtration; the Spirit will be in a pretty Quantity, the Oil little and inconsiderable. The Spirit of *Honey* is an excellent Aperitive, cools the violent Heat of Fevers, quenches Thirst, and strengthens the Stomach, and may be put into Juleps, to give them a pleasing Acidity. It may be rectified by distilling it in a glass Cucurbit in Sand. What ascends first is Flegm; that which rises last is the strongest

strongest of all, and is used to cleanse old Ulcers, as the Oil is to scale rotten Bones.

Tincture of *Honey* is made of pure *Virgin Honey*, mixed with washed Sand or Bone-Ashes, whereon is thrown the best rectified Spirit of *Honey*; then let them stand in Digestion in a Cucurbit, having a flat Bottom, till the Spirit is tinged of a golden Colour, which decant, pouring new Spirit upon the Fæces, so long till it will be no longer tinged; mix the tinged Spirits together, and abstract in *Balneo Mariæ*, till only a third Part remains, which is the Tincture, and one of the noblest Medicines for inveterate Coughs, Phthisicks, and Catarrhs, from a Quarter of a Spoonful to a whole one. *Mead* is composed of one Part of *Honey* to eight Parts of Water, well boiled, and worked up with Yest Blood-warm, or clarified with the Whites of Eggs, Shells and all: Some add Aromaticks; as Cloves, Nutmegs, Cinnamon, Lemon-Peel, and Ginger; others Alteratives, as Thyme, Marjoram, Mint, Balm, Rosemary, Cowslip, &c. some Diureticks, as Sweet-Briar, Eryngo, Tamarisk, &c. and so every Person makes it to his Fancy, whether for medicinal Uses, or other Purposes. *Metheglin* is made of one Part *Honey*, and four Parts Water; to which may be added, Balm, Sage, Mint, Rosemary, Thyme, Bay-Leaves, Angelica, Savoury, *Roman* Wormwood, Geranium Moschatum, Origanum, Nutmegs, Mace, Cloves, Cinnamon, Ginger, or the like, in the boiling of the Liquor; and in tunning of it up, some add black Currants, others Raisins of the Sun. To make *Hydromel*, take of the best *Honey* eight Pounds; Raisins four Pounds; Tamarinds half a Pound; fifteen Quarts of Water; boil all so long till an Egg will swim on the Top; let the Fæces settle; then decant the clear Liquor into a Cask, adding to every five Pounds four Ounces of Spirit of Wine rectified; let it stand six Months, and then drink of it as you please. All the Preparations of *Honey* are pectoral and diuretick.

25. Of Bees-Wax:

Pomet. **B**ESIDES the different sorts of Honeys, and the Uses made of them, we have a great Trade in yellow and white *Wax*. The first sort is made from the Pressing of the Honey-Comb over a Fire, with a sufficient Quantity of Water; and when all is dissolved, they strain it through a Cloth; this done, they melt it, and scum off the Dross and Froth, and afterwards cast it into Cakes. Some Persons, to refine the *Wax*, use *Roman*, or some other Vitriol; but for my own Part, the best Secret I know of, is to purify it well by melting.

That which we call *Wax*, is, in its natural State, the Honey-Comb which contains the Honey in the Hive. *Poland*, *Barbary*, *Bretagne*, and several Parts of *France*, furnish us with a great deal of yellow *Wax*; but that of *Dantzick*, *Bretagne*, and *Champagne* is reckoned the best; but it is of no Consequence what Place it comes from, so it be pure and of a good Kind. Chuse such as is of a high yellow Colour, a good Smell, easy to break, and that does not stick to the Teeth; and take care that it be the same on the Inside as the Outside; and, when in large Cakes, as that from *Dantzick*, that there be no Water, Stones, or Earth in the Middle, or that it be not mixed with Resin, white Frankincense, or Pitch, or coloured with Turmeric or *Roucou*.

The Use of yellow *Wax* is considerable for several sorts of Works; as Tapers, Candles, and other *Wax*-works. It is of great Use in Medicine; for it serves to give a Body to Ointments and Plaisters; and likewise to make Sealing-wax for great and less Deeds. Some will have it, that yellow *Wax* has no Virtue in Physick. But by the Retort there is made with *Wax*, mixed with Earth, Bole, or Oak-ashes, a white thick Oil, like Butter, which is called Butter of *Wax*, which ought to be white, and have the Smell of *Wax*. Of this Butter, together with Bole, Chalk, or the like, in Powder, by means of a Glass Retort on a Sand-fire, they draw a clear white Oil, like Water, that is of an agreeable and pleasant Smell. The Butter and Oil of *Wax* are much valued for the Cure of Chilblains, especially those that are apt to chop, and other Maladies of the like Nature. That which remains in the Bags, after the *Wax* is strained out, is nothing else but the dead Bees and other Filth: It is used by the Farriers. We meet with, besides this, in the Hives, a kind of red *Wax*, called *Virgin Wax*, or *Propolis*, which is that the Bees use to stop up the Chinks or Holes of the Hives, to hinder the cold Air from entering. And therefore the more Cracks or Holes there are about a Hive, the more *Propolis* will be found there.

This was once much used, but at present is hardly known in the Shops, though it is very good in nervous Cafes.

Of White Wax:

The *White Wax* is made out of the yellow, cut by a certain Engine into small Flakes, and then bleached in the Sun, by which it will become very white. It is then cast into round Cakes, some thicker, some thinner. That is the best which smells well, and chews hard, not being mixed.

mixed with Sheeps Suet, and is withal of a clear Colour, without any Cast of Yellowness. The best, and most proper to turn white, is the yellow *Wax* of *Bretagne*, which when it is well made, as that usually is of *Chateau Gontier*, eight Leagues from *Angiers*, which passes for the best Sort in *France*, will be pure, white, clear, transparent, in thick Cakes, that, when broken betwixt the Teeth, does not stick, neither has any ill Taste or Scent.

It is with this fine *Wax* we make the finest Works; as Tapers, Wax-Candles, Flambeaux, Figures, and other Curiosities in Wax. And we reckon, after the *Chateau Gontier Wax*, the second Sort is that of *Angiers*; the third that of *Mans*; the fourth that of *Holland*, which is generally brought in great Cakes of four or five hundred Weight; and the first Sort is that we call the *Dutch Wax Royal*; the fifth is that of *Amboise*; the sixth of *Chaumont* near *Troyes*; the seventh and the worst is that of *Roüen*, because of the great Addition of Suet they put in, and it is better or worse according to the Quantity of Suet that is mixed with it.

[*White Wax* is emollient and less resolvent than the yellow; because the Dews have washed away a great Part of its Salts.]

Of the soft Red and Green Wax.

The soft *Red Wax* is made of *White Wax* melted with Turpentine that is washed, and then coloured with Vermilion or Alkanet. This Wax ought to be of a good Consistence, a fine Red, and well made. The chief Use of this, as well as the Green, is for the Lawyers to seal Writs and Deeds with. The *Green Wax* is made the same Way, only Verdigrise is used instead of Vermilion.

Of the Black Indian Wax.

In several Parts of the *Indies*, as well *East* as *West*, they have little Bees, which hive, or make their Nests in the Hollows of certain Trees; the Figure of which is in the Plate of Bees. These Bees deposit their Honey in little Cells of black Wax, which are of the Size and Shape of Pigeons Eggs: The Honey is very peasant, and of an Amber Colour. The *Indians* use this Wax to make Tapers of, and gather from the Tree the Balsam called *Tolu*, in Vessels made of it. Some Authors say, that there is an Animal like a Cat, that is black, which the *Indians* call *Hierat*, or the Honey-Beast, which climbs the Trees, and eats all the Honey; and that which is surprizing is, that this Animal draws out the Honey-Comb with his Paw, and does no Damage to the Bees; and the

Bees do not hurt him, because they have no Stings like ours. This Wax was formerly much used in *Spain*, and a little in *France*; but at present we know not what it is, being one of the scarcest Drugs we have. All the Kinds of Wax are naturally composed of Oil, volatile Salt, and Flegm, without Earth; being emollient, resolute, and proper for Ointments, Cerecloths, and Plaisters.

[The Bee, like all other living Creatures, is produced from a Male and Female of the same Species. There are in every Hive three Sorts of them, the Mules, or common Bees; and the Drones which are the Males, and have no Sting; and the Females, or Queens, commonly but one in a Swarm, in which are perhaps a hundred Drones, and ten thousand common Bees. The Queen will, in one Summer, give Birth to eight thousand young ones. As to the Honey, notwithstanding that the White is generally preferred, the Yellow is best in Medicine, as it is not so apt to candy, and is more spirituous.]

It is penetrating and deterging, and therefore good in all Obstructions from viscid Humours, but not proper in thin hot Habits. Many Authors relate that Honey has been found in Places where there were no Bees; but as they never talk of its being formed into a Mass, or lodged in Combs, in all Probability they only mean a Honey-Dew, which is indeed what the Bees make their Honey from.

The Chymical Preparations of Wax are but little used, but more than half the Ointments and Plaisters of the Shops owe their Consistence to it.]

26. Of Ambergrise.

Ambergrise is the dearest and most valuable Commodity we have in *France*, and the least understood, its Nature and Origin being the most contested; if I should relate what Authors have said upon this Subject, it would make a Volume of itself. But to reproach no body, and not to repeat what so many Authors have said, I shall affirm, that *Ambergrise*, which we have brought us from several Parts, and chiefly *Lisbon*, is nothing else but a Mass of Honey-Combs that fall from the Rocks into the Sea, or are torn off by the Waves of the Sea, the Violence of the Winds, or otherwise. These Honey-Combs being in the Sea, whether by a Property of the Sea-Water, or by the Virtue of the Sun Beams, are rendered liquid, and floating upon the Water, as they are often found.

Many Persons will be surprized at what I advance, that *Ambergrise*, whose Nature hath been hitherto

hitherto so little known, comes from nothing but Bees Wax, which I could not have affirmed, if a Friend of mine had not assured me, he had seen a Piece that was one half *Ambergrise*, and the other half Wax; and to confirm what I say, Mr. *De Monconys*, Lieutenant-General of *Lyons*, at Page 71, of his *Voyages*, affirms that he was informed in *England*, that *Ambergrise* was nothing but Honey-Combs the Bees make upon the large Rocks, which are on the Sea-side in the *Indies*, which heated by the Sun, loosen and fall into the Sea, and by its Agitation are brought to Perfection; and that having broken a large Piece of *Ambergrise*, which was not yet perfectly concocted, he found in the Middle of its Substance, the *Honey-Comb* and the *Honey*, both together: And for further Confirmation of this, we may add, that when the *Ambergrise* is dissolved in Spirit of Wine tartarized, there remains at last a Substance entirely like Honey. *Ambergrise* therefore appears to be no other than the Production of the Honey-Comb, by the large Masses it is sometimes found in, not indeed of three Hundred Weight, as some have writ, but however of thirty or forty Pounds.

Mr. *Tavernier*, amongst other Things on this Subject, says, that in the Year 1646, or 1647, a *Zealander*, that was of one of the best Families of *Middleburg*, who was Governor for the *Dutch East-India Company* in the Isle of *St. Maurice*, which is on the East of *Madagascar*, found on the Shore a Piece of *Ambergrise* forty-two Pounds Weight, which he sent to the Company; but, as such Persons have ever some Enemies, and the Piece appearing as if something had been taken from it on one Side, the Commander was accused of having taken half, of which however he justified himself at *Batavia*.

As to the Choice of *Ambergrise*, which some have called by the Name of *Oriental Ambra*, let it be in fine Pieces, of a greyish Colour on the Outside, marked with little black Spots within, of a sweet pleasant Smell; and meddle not with that which is soft, fat, musty within and without, and which is full of Dirt and Filth, that is got when the *Ambergrise* was liquid, or before it gained its Solidity. The best Trial of it is a Dissolution in Spirit of Wine; for that which is purest, and leaves the least *Fæces*, is the best. The Fictitious is known by the Smell as well as Colour; the Materials of which it is made, appearing either too black or too white: they are commonly Musk, Civet, Aloes Wood, Storax, *Labdanum*, Goat's Blood dried, &c.

Ambergrise, besides its Use for the Perfumers by reason of its excellent Scent, is a very good

Medicine to warm the Stomach, and prevent the Cause of the Gout from attacking the vital Parts; it refreshes the Animal Spirits by its volatile Sulphur, strengthens the debilitated Parts, and restores in Consumptions. As *Ambergrise* is a very dear Commodity, those who buy Quantities of it, must take great Care that there be no Mixtures in it, or that it be not counterfeited. The Fineness of the Substance of this Drug, is the Reason that it is never exposed to the Violence of the Fire, but only dissolved in Spirit of Wine, or Spirit of Roses, or some such like *Menstruum* to prepare it, exalt its Smell, and separate it from its earthy Parts: And this is called by the Name of *Tincture* or *Essence* of *Ambergrise*.

Of Essence of Ambergrise.

Essence of *Ambergrise*, used by the Confectioners, Perfumers, Distillers, and others, may be made after these several Ways: To make Mr. *Charas's* Essence, take choice *Ambergrise*, two Drachms; Sugar-candy, two Drachms; Spirit of Wine, four Ounces; ardent Spirit of Roses, half an Ounce; put them into a Glass Matrafs, with a blind Head, luted in the Junctures, set in the Heat of the Sun, Horse-Dung, or Sand; dissolve and make a Tincture; decant the clear, and keep it for Use in a Glass close stoppt: The Dose internally is three Drops in Cinnamon-Water, or any restorative Liquor. Another Essence is made thus: Take *Ambergrise*, and white Sugar-candy, in Powder, of each two Drachms; Musk one Drachm; Oil of Cinnamon, Citrons, Oranges, Roses, Lavender, of each two or three Drops; mix and beat it up into a Paste, and dissolve it over a gentle Heat, in Spirit of Wine, in a Bolt Head; or you may make it with *Ambergrise* alone, in Spirit of Wine tartarized, digesting in a Sand Heat, or Horse-Dung, for some Time.

The Way to make any odoriferous Thing yield its Scent, is by opening the Body of it (which done, the Smell exerts and diffuses itself immediately) in such Vehicles as have Power either to dissolve the separated Particles, or extract their Sulphur or Tincture. *Ambergrise* is opened by grinding it first with Sugar-candy, then with Oil of *Ben*: It is also opened by grinding it with the Yolk of an Egg, and several other Ways. *Ambergrise*, in its natural State, scarcely affords any Scent at all; but if it be opened, and excited by Solution, with a convenient Proportion of Odours and volatile Sulphur, such as that of *Civet*, it presently yields a sweet and pleasant Flavour. For Example: Take ten Grains of *Ambergrise*, and three of *Civet*; beat them together in a Mortar, and the *Ambergrise*

grise will presently melt; upon which, put two or three Drops of Juice of Lemons, so will you have a Perfume of an admirable Sweetness. There is besides the *Ambergrise* we commonly sell, a white Kind which is used in the Delicacies at the Tables of Persons of Quality; as also a black Kind like *Liquid Labdanum*, which is said to have been thrown out of the Stomachs of Fish that had kept it there some Time; this is used by the Perfumers, because it has an agreeable Smell, and is cheap. All the Kinds are found on the Sea Shores, particularly those of the *Archipelago*, because of the frequent Earthquakes that Part of the World is subject to, which dislodge all the Combs the Bees make on the Rocks at the Sea Side.

Ambra-grisea, seu Ambra Cineritia, Lemery. or *Ambergrise*, is a valuable Commodity.

It is very dry, and almost as hard as a Stone, light, opaque, greyish, and scented: It is found in Pieces of different Bigness, floating upon the Water in several Parts of the Ocean, as towards the Coasts of *Muscovy* and *Russia*, and particularly in the maritime Parts of the *Indian Seas*. There was a Piece of a prodigious Size, that was said in the Year 1694 to be carried into *Ireland*, that weighed 182 Pounds. The *Naturalists* have differed much in their Opinions concerning the Production of *Ambergrise*, 'till of late it seems to be universally agreed, that it is made from the Honey-Combs that fall into the Sea from the Rocks, where the Bees had formed their Nests; and this is confirmed by Experience, because several Persons have seen Pieces that have been one half *Ambergrise*, and the other nothing but the plain Honey-Comb: And others again have met with large Pieces of *Ambergrise*, where, in breaking of it, they have found in the Middle the Honey-Comb and the Honey too. Chuse such as is clean, well dried, light, and spotted within with little black Spots, of a sweet pleasant Smell; but avoid the moist, soft, and foul *Ambergrise*, as being good for nothing: It is called *Ambra Cineritia*, as being of an ash Colour. It strengthens the Brain, the Heart, and the Stomach; procures Alacrity, and makes the Spirits gay, provokes Lust, and is a good Antidote against Poison or Infection in Men; but raises the Vapours in Women, therefore let them avoid it. We meet sometimes, amongst the Druggists, with a white *Ambergrise*, which differs from the other not only in Colour, for it is nothing so strong, nor half so good. There also is a black *Ambergrise*, but it is good for nothing in Physick, and but of very little Use for the Perfumers.

[*Ambergrise* is the *Ambra*, Aldr. Mus. Met. 430. *Succinum griseum, Ambragrisea vulgo, Char.*

Foss. 15. Ambragrisea, Mont. Ex. 12. There have been a Multitude of different Opinions about the Production of this precious Perfume; but the true Account of it is, that it is a soft Bitumen, oozing out of the Bottom of the Sea, and afterwards hardening. It frequently contains small Stones, Pieces of Shells, and the Beak Mouths of Fish of the Calamary Kind, which have been mistaken for the Beaks of Birds. It picks up these while soft at the Bottom of the Sea.

Ambergrise was unknown to the antient *Greeks*, for no Author mentions it before *Actius*. It is an excellent Cephalick and Cordial, enlivens the Spirits; and is very effectual in Faintings, and all other Affections of the Head and Nerves, and among the Eastern People is greatly esteemed as a Provocative.]

27. Of the Viper.

THE *Viper* is a Kind of Serpent that *Pomet.* is very common in several Parts of *France*, but chiefly in *Poitou*, from whence almost all the *Vipers* come that we sell at *Paris*. These Animals were terrible or frightful to all the World heretofore, but they are very familiar to us at present; inasmuch that there are very few People of Quality in Places where they are to be had, but what make Use of them as good Diet, and a specific Remedy against several sorts of Diseases. This may be seen in Mr. *Charas's* Treatise of them, wherein he has produced all that can be said on that Subject; to which the Reader may have Recourse at his Pleasure. I shall content myself in directing him to chuse the largest, liveliest *Vipers*, and such as are newly taken; and to take Care that they are put into temperate Places, because extraordinary Cold or Heat is hurtful to them: They ought likewise to be careful when they receive any fresh *Vipers*, to take them out of the Boxes they are brought in, and to take from them the dead ones, if there are any, as sometimes it happens; and to put them into a Tub with Bran or Moss; not that it serves them to feed upon, as some fancy, because these Creatures never eat after they are taken; and notwithstanding this, they will continue alive six Months. It is likewise to be observed, that they are to be taken either by the End of the Tail, or else with a Pair of Tongs; because this Animal, when he finds himself squeezed, bites whatever he meets with; and the Biting of the *Viper* being very dangerous and even mortal, is the Reason why the Takers of them ought to be very cautious. The Keepers of them ought to be so likewise, lest by Mischance they should escape and get into any House, which would be very

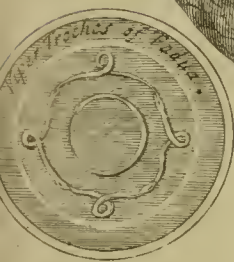


The viper dry'd.

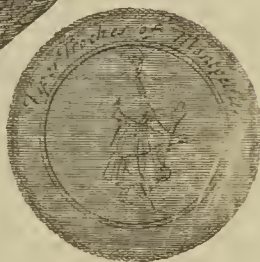
27



Heart & liver of a Viper.



A Viper bringing forth young ones.



29

The Sea Skink.



very dangerous, especially where there are Children.

We have a great many dried *Vipers* brought from *Poitiers*, which ought to be heavy, large, long, well dried, and the freshest killed that can be got; for in a little Time after they are dead, the Worms will eat them in such a Manner, that nothing will be left but the Skeleton. You ought to be careful likewise, that every Bundle or Parcel of *Vipers*, which is usually a Dozen, have the Hearts and Livers along with them, these being the most noble Parts of the Animal, and weigh three Ounces and a half; and sometimes, but very rarely, four Ounces; and take Care they be not such as have died of themselves, which you may easily discern, by their extraordinary Blackness. Some will say, that there are Snakes sold for *Vipers*; but this I cannot affirm, having never known it to be done at *Poitiers*. There is, besides, a great deal of *Vipers* Powder sold; but those that buy it should take special Care, because there is nothing more liable to be adulterated. The Hearts and Livers, reduced to Powder, and sifted through a fine Silk Sieve, is what some call *Bezoar Animal*, pretending that this Powder, thus made, has the same Virtues with the *Oriental Bezoar*, treated of before.

They bring us also from *Poitiers*, the volatile and fixed Salt of *Vipers*, the Fat, and the black Oil that is made by the Retort, whose Virtues and Preparations you have thus described by Mr. *Charas*. Take *Vipers*, all their Parts very well dried, cut them into small Pieces, with which fill a large Retort of Earth, or Glass well coated; fill it almost quite up to the Top, fix to it a very large Receiver, luting the Junctures well, place it on a naked Fire, in a close Reverberatory Furnace, with its Dome; shut up the Register of the Dome, and the Door of the Fire-place, make a gentle Fire in the Cinder-place, which keep on Foot for two Hours, only to heat the Retort and Furnace; then removing the Fire into its Place, keep it in the same Heat for two Hours longer; at the End whereof encrease the Fire one Degree, giving a little Air to the Register of the Dome, continuing it so for two Hours more; and encrease the Fire to the third Degree for the same Time; after which set the Register of the Dome quite open, encreasing the Fire to the highest Degree, which continue so long till nothing comes out of the Retort, and that all the Vapours in the Receiver be converted into Salt or Liquor; then cease the Fire, and the Vessels being cold, unlute the Receiver, and dissolve the Salt in the Liquor, or Spirit.

To rectify it, put all this distilled Matter into a Glass Matrafs, with a long Neck; place it in a

Sand Heat, cover it with its Head, and join to it a small Receiver, luting well the Joints, and give it a gentle Heat, so will the volatile Salt ascend, white and crystalline, to the Top of the Head, which take and put up into a Glass Bottle, stopping it very close. Continue the Rectification, separating and keeping apart the Spirit, which is the remaining Part of the volatile Salt, dissolved in some Flegm, and the Oil; and cause all the volatile Salt, and oily Parts, to ascend, casting away that which lies at the Bottom of the Matrafs, as a Thing of no Use.

This volatile Salt of *Vipers* is reckoned an Antidote against Poisons, and a perfect Cure for the Biting of the *Viper*, or any other Kind of Serpent, or venomous Creature: It is also prevalent against the Measles, Small-Pox, Plague, or Pestilence. It resists Putrefaction in the highest Degree, becomes specific in intermitting Fevers, chiefly the *Quartan*; and there is scarce a Medicine known in the World more able to purify the Mass of Blood, and give it its natural Fluidity: whence it does such considerable Feats in chronick Cases; as Scurvies, *Erysipela's*, Scald Heads, and strumous Breakings-out; causing the foul impure Humours to perspire through the Pores of the Skin. It is also one of the most powerful Remedies in Nature for Gout, Rheumatism, and Venereal Relicks; for it opens, penetrates, attenuates, and is sudorific; so that it drives out any corrupted or malignant Humours, through the Habit of the Body; it dissolves coagulated Blood, removes Inflammations, prevents Aposthumes, and cures Pleurifies. This Salt is very aperitive, and opens Obstructions both of the Head and other Parts; and relieves all Diseases of the Brain and Nerves; as Palsies, Convulsions, Vapours, Fits of the Mother, and the like; so that both for external and internal Uses, there is scarcely found a more universal Medicine.

All other Preparations of *Vipers*, as Powders, fixed Salts, Tinctures, Decoctions, Broths, Jellies, Wines, Essences, Troches, Elixirs, Extracts, &c. compared with the volatile Salt, are nothing, for in that is to be found the Sum of all that is in the *Viper*: The Oil is so fetid, that it cannot be taken inwardly; outwardly it may be used to smell to, and to touch the Nostrils with in Vapours and Fits; but if it be made into an Elixir, with Spirit of Nitre, and Spirit of Wine tartarized, it is a most fragrant Medicine, cheers the Spirits, suppresses Vapours, and invigorates Nature to a Miracle.

Le Febure teaches us how to fix this volatile Salt, which is done by Acids, viz. with well rectified Spirit of Salt, dropping it upon it, dissolved in its own Flegm, 'till the Effervescency and Strife ceases,

ceases, by which the volatile Salt is united to the Acid: Now though there be no great Need of this, yet it may be of some Use to watry Stomachs; and though the Taste and Shape of this Salt, thus fixed, much resembles Bay Salt, it is quite another Thing in its Effects. This is evident by mixing it with double its Weight of Salt of Tartar, and subliming in proper Vessels; for then the volatile Salt will ascend with its first Force, Strength, and Virtue.

Vipera, or the *Viper*, is a kind of *Lemery*. Serpent, which comes alive out of the Belly of its Parent, and not from an Egg, as the other Kinds do. It is about as long as one's Arm, and two Inches thick; sometimes bigger, and sometimes less, but never arrives at the Size of the large *Snake*, though in outward Appearance they are very like them. They are covered with a smooth Skin, a little scaly, on the Backside of several Colours as in Waves, soft and viscous underneath, and of very close Pores. The Jaws are set on both Sides with little Teeth, like the Snakes; but besides these little Teeth, there is on each Side a kind of a Tusk, or a long, sharp, cutting Tooth, that is sometimes forked. In the Jaw is a Bladder, full of a yellowish Liquor; the Tongue is long and cloven, which it darts out with great Violence; being provoked, it looks like a Firebrand, which proceeds from the quick Motion or Agitation of the Spirits. This Tongue was supposed to be venomous, but it contains no manner of Harm in it: The Eyes are very small. The *Vipers* breed in wild stony Places in *Dauphiny* and *Poitou*: They live, being at Liberty, on Rats, Frogs, Worms, and several other Insects; but when taken and confined, they will live about a Year, without any other Subsistence but the Air they receive by the little Holes made in the Tubs or Chests wherein they are kept: The Reason why they live so long without eating, is, because the Pores of the Skin are so closely contracted, that they emit but very little Spirits or *Effluvia*.

They take the *Vipers* in Spring Time, or Autumn, because they are then fatter, and more active than in any other Season: The Peasants take them with little wooden Tongs made for that Purpose, and carry them in Bags to the Apothecaries. They are much more sprightly and gay when they are in the Field, than after they are taken, because they then draw themselves up into a narrower Compass, and contract their Pores. These differ from other Serpents, not only as to the two Teeth that are in their Jaws, but likewise by a different Connection of their *Vertebrae*, which hinders them, when they are taken by the Tail, from twisting

and turning about the Arm or the Tongs, as the *Snake* does.

The *Viper* bites with his long Teeth, and shoots into the Wound a Spirit, or very volatile acid Liquor, which insinuates into the Vessels, coagulates, by little and little, the Blood, and interrupts the Circulation; from whence flows Death, if not prevented. This Effect has a great deal of Analogy with that which happens upon syringing, through Curiosity, some acid Liquor into the Veins of a Dog, or other Creature; for in a short Time he falls into Convulsions and dies.

The Accidents which attend those who have had the Misfortune to be bit by a *Viper*, are first of all, that they grow pale, and then turn bluish, as the Blood is more or less tinged in the Veins and Arteries. In the second Place, they become restless, melancholy, and sleepy; the Pulse intermitting, because the Course of the Spirits being intercepted by the *Coagulum* that is made in the Vessels, the Blood cannot circulate but with Difficulty. In the third Place, they are chilly or cold, have Inclinations to vomit, and convulsive Motions; because the saline and acid Particles which are introduced into the Blood, and which are pungent, prick or irritate the internal Coats of the Veins and Arteries. And lastly, they die, because the Blood growing sharper, and coagulating still more and more, the Passage of the Spirits is entirely stopped, and there can be no Circulation, without which they cannot live.

The Remedies against the Biting of *Vipers* are external and internal. The external are, the speedy binding of the Part wounded, if possible, making the Ligature tight, in order to hinder the Poison from spreading further; but if the Part that is bit cannot be bound, you ought instantly to apply upon it the Head of the *Viper* that did the Mischief, after being bruised, or else that of another *Viper*; otherwise, to heat a Knife, or some Piece of flat Iron red-hot, and hold it near the Wound as hot as the Patient is able to bear it; or to burn upon the Wound a little Gun-powder; or else scarify, and apply Treacle with Garlick and Sal Armoniack bruised together.

These external Remedies open the Pores of the Wound, and make the envenomed Spirits flow; but it ought to be observed, that these sorts of Medicines should be used upon the Spot where the Biting is made; for if there be Time given to the Poison to enter into the Vessels of the Body, before Application, all will be useless, because the Poison returns no more to the Wound. But though external Remedies ought not to be neglected upon this Occasion, they are what bring but little Relief, in Comparison of those Things that may be

given inwardly; for the Venom of the *Viper* being very subtil, it passes instantly into the Blood, and therefore the Patient must take such Medicines as have Power to break the Points of the Acids, dissolve the Blood, and other coagulated Humours, excite or promote the Circulation, and push forward by Perspiration and Urine whatever Poison of the *Viper* may remain.

The volatile Salts of Animals are efficacious for these Intentions, because they are alkaline, very volatile, rarifying, sudorifick, and aperitive. That of *Vipers* is preferable to all others, because it is the most subtil; but instead of that, we may use the volatile Salt of *Harts-horn*, that of Urine, or human Skull. *Venice-Treacle* is very proper, if old, to relieve this Malady, because it is composed of Ingredients chiefly attenuating and rarifying; but when it is new we cannot use it with Success, because the *Opium*, which has not yet been rarified by Fermentation, will fix the Poison, and rather thicken the Humours, than rarify and discharge them.

The largest *Vipers*, and such as are well fed, ought to be chosen, and such as are caught in Spring-time or Autumn, when they are in the best Condition. The Trunk of the *Viper*, separated from the Skin and the Entrails, is administered against Poisons, to purify the Blood in the Small-Pox, intermitting and malignant Fevers, boiled in Broths, or taken in Powder, from eight Grains to two Scruples, or a Drachm. The Fat of the *Viper* is sudorifick, resolute, and anodyne, taken internally or externally; the Dose from one Drop to six. The Liver and Heart of the *Viper* being dried and powdered, are called *Bezoar-Animal*, and are reckoned the most powerful Part of the *Viper*. The Gall is sudorifick; the Dose being one or two Drops. The Word *Vipera* comes from *Vi*, Force, and *parere*, to bring forth; the Antients believed that the Female *Vipers*, in the Pleasure of Coition, eat off the Head of the Male; and that the young ones, to revenge the Death of the Father, ripped open the Belly of the Mother; but the Word *Vipera* seems rather to be derived from *viva*, alive, and *parere* to bring forth, which is as much as to say, the kind of Serpent that is brought forth alive, because all the other Kinds are produced from Eggs.

28. Of Treacle, commonly called Venice-Treacle.

Pomct. TREACLE is a Composition of certain choice Drugs, prepared, powdered, and reduced into an Opiat or liquid Electuary, with Honey. *Treacle* takes its Name

from the *Viper*, which the *Greeks* call *Therion*, or *Thyrion*; and it was compounded by *Andromachus* the Father, a Native of *Candia*, and first Physician to *Nero*. The *Venetians*, of late Years, have got the Reputation of being thought the only People who have the true Way of preparing the *Treacle*; but beside them at present the Apothecaries of *Montpellier* make such vast Quantities of it, that one may see Multitudes of their *Treacle* Barrels; and among them they have reduced it to so low a Price, that a Pound of good Honey will sell for more than the same Weight of this pretended *Treacle*. If I was to publish the Frauds that are committed in preparing this Antidote, I am satisfied the Magistrates would presently put a Stop to the Abuse, both as to that which is sold about at Markets and Fairs, as what is sold at *Paris* for sixteen or eighteen Pence a Pound. Though, notwithstanding it is sold at such a low Price, those who deal in it get considerably, because what they sell is nothing but the worst Honey, into which is incorporated a Parcel of rotten worm-eaten Roots and Drugs, that are no better than the Sweepings of Shops; to promote or recommend the Sale of this, they cover the Pots with a printed Paper, whereon are two *Vipers* that compose a Circle, crowned with a *Fleur-de-Lis*, which contains this Title, *Fine Venice Treacle*, though it is made at *Orleans* or *Paris*.

As to that of *Montpellier*, I have seen it often made there, with all the Exactness that can be; but what is sent to the Fairs for common Sale, they mix with large Quantities of boiled Honey, being obliged to sell it at about eighteen Pence a Pound; though that which is true stands them in above forty Pence a Pound. The *Treacle* Makers are called by the honest Apothecaries, to ridicule them, Mustard-Makers. As to the *Treacle* made at *Venice*, I can say nothing to it, not knowing directly how they make it; but as to what is made at *Paris*, by Messieurs *Charas*, *Geoffry*, *Jossion*, *Bolduc*, and *Rouviere*, I have seen it prepared with all the Care imaginable. And I can affirm, for a certain Truth, that there was a large Quantity thereof made in *March* 1688, without substituting any one Thing for another, and with the finest and best Drugs that were ever seen, being designed for a Master-Piece, or Trial of Skill; but as we are not immortal, and that those who sell this may be capable of knowing the true Composition, and of making it themselves aright, in order to prevent Abuses, I shall here give you the true Receipt; which I would not have done, if Mr. *Charas*, who has writ a particular Treatise of *Treacle*, had mentioned the Names of the Drugs in *French*: his Book is entitled, *The Natural History*

History of Animals, Plants, and Minerals, that make up the Composition of Andromachus's Treacle.

Andromachus's Treacle.

Take Troches of Squills, six Ounces ; Troches of Vipers and Hedycroy, Long Pepper, Opium prepared, of each three Ounces ; red Roses, Florentine Orrice, Juice of Liquorice, wild Navew Seed, Tops of *Scordium*, Balsam of *Judea*, fine Cinnamon, and Troches of Agarick, of each one Ounce and an half ; Myrrh, *Arabian Costus*, Saffron, *Cassia Lignea*, *Indian Spikenard*, Flowers of Camels Hay, *Olibanum* in Tears, White and Black Pepper, Dittany of *Crete*, Tops of white Horehound, fine Rhapontick, *Arabian Stæchas*, *Macedonian Parsley Seed*, Mountain Calamint, Turpentine of *Cyprus*, Cinquefoil-Root, Ginger, of each six Drachms ; Poley Mountain, Ground Pine, *Storax* in the Tear, Spicknel, true *Anomum*, Valerian, Celtick Spikenard, sealed Earth, Germander, *Indian Leaf*, calcined Roman Vitriol, Gentian Root, Gum Arabick, Juice of *Hypocistis*, Fruit of the Balsam-Tree, Aniseed, Fennil-Seed, common *Cardamum*, *Marfilian Hartwort*, Treacle-Mustard, Flowers of St. *John's Wort*, Seeds of Bishop's Weed, Gum Sagapen in Tears, of each four Drachms ; *Castor*, long Birthwort, Candy Carrots, *Jews Pitch*, Flowers of the lesser Centaury, *Opopanax*, and *Galbanum*, of each two Drachms ; choice Honey three times the Weight of all ; *Spanish Wine* as much as to give the due Consistence.

To make the Troches of Squills. Take Pulp of baked Squills, twelve Ounces ; Flower of the bitter Vetch, six Ounces ; beat them into a Mass, and form them into Troches. Troches of Vipers are made of the Flesh boiled in Water with Dill and Salt, and cleansed from the Bone, eight Ounces ; Crumbs of Bread dried and sifted, two Ounces. According to Mr. *Charas* they are made up of Dittany Root instead of Bread Crumbs. For Troches of *Hedycroy*, take yellow Sanders, Herb-Mastick, Marjoram, *Afarabacca*, of each two Drachms ; Camels Hay, *Calamus Aromaticus*, the great Valerian, Aloes Wood, true Balsam, Cinnamon, *Arabian Costus*, of each three Drachms ; Myrrh, Saffron, *Indian Leaf*, Spikenard, *Cassia Lignea*, of each six Drachms ; true *Anomum*, one Ounce and an half ; Mastick in Tears, a Drachm ; *Spanish Wine* enough to form into a Mass. The Way of making all these Troches is to be met with in most *Dispensatories*, especially those of *Paris*, *Bauderon*, *Charas*, and others.

The Grand Treacle reformed by Monsieur d'Aquin, the King's Physician.

Take dried Vipers, with the Hearts and Livers, twenty four Ounces ; Troches of Squills, Extract of Opium, of each twelve Ounces ; Roots of *Contrayera*, *Virginia Snake Root*, *Angelica*, the great Valerian Spiguel, Gentian, Birthwort, *Costus*, *Indian* and Celtick Spikenard, Cinnamon, Oil of Nutmegs by Expression, Saffron, Dittany of *Crete*, *Indian Leaf*, Water Germander, Mountain Calamint, Poley Mountain, Ground Pine, Flowers of St. *John's Wort*, and the lesser Centaury, *Arabian Stæchas*, *Anomum*, small Cardamums, *Macedonian Parsley-Seed*, Bishop's-Weed, *Marfilian Hartwort*, and Myrrh, of each eight Ounces ; Refin of *Storax*, *Opopanax*, Gum Sagapen and *Castor*, of each four Ounces ; a mellaginous Extract of Juniper-Berries, seventy-two Pounds ; *Malmsey Wine*, one Quart.

This Prescription of Treacle has been better received than that of *Andromachus*, of later Years, by Reason of the vast Number of Ingredients, and the little Virtue that most of them have, which was the Reason why Mr. *d'Aquin* expunged what was superfluous, and added other Things more necessary ; the Description of which Additions he gave to Mr. *Charas* to insert in his Royal Galenical *Pharmacopœia*. As to the Virtues of Treacle, I shall not insist on that Topick, because there are several Authors who have treated of them ; besides the several printed Papers dispersed with it, that come from *Venice* or *Montpellier*, that explain the Use of it. In several *Dispensatories* we meet with a third Sort of Treacle, called the *Diateffaron*, because it is compounded of four Drugs, which are the Gentian, round Birthwort, Bay-Berries, and Myrrh, all reduced into Powder, and made up with Honey, and Extract of Juniper, into an Electuary. This Treacle, tho' of a small Price, is not wanting in good Qualities, being very useful for all Sorts of Cattle. Some People call it the *Poor's Treacle*, or *German Treacle*.

[And with the Addition of Ivory Shavings, in equal Quantity to the rest, it is what is commonly sold under the Name of *Diapente* ; this is much used by the Farriers, who chuse to buy it in the Powder, not mixt into an Electuary.]

Along with this Medicine, we have brought from *Montpellier* a Treacle-Water, called so, because Treacle is the Basis of it, and by Reason its Virtues, in some Measure, are like it. The *Montpellier Treacle-Water* of *Bauderon* make thus ; Take fine Treacle, three Ounces ; Roots of Tormentil, *Angelica*, Vipers Grass, Dittany of *Crete*, and

and Saffraſas, of each two Ounces ; Bole, one Ounce ; Juniper-Berries, Citron-Seeds, *Carduus Benediſtus*, Sorrel, and Purlane-Seed, of each half an Ounce ; Betony, Marygold, Balm, Water Germander, Borrage, and Buglofs, of each one Handful ; fine Cinnamon and Mace, of each two Drachms ; Vinegar of Roſes, made of White-Wine, two Pounds ; Juice of Citron and Verjuice, of each ſix Ounces : Chuſe and prepare all your Drugs according to *Bauderon's* Diſpenſatory ; and from thence, by a Glaſs Alembick, you may draw a clear Water, of a ſtrong Smell of Treacle, having the ſame Virtues with it : But the ſmall Power there is in Vinegar, Juice of Citrons, and Verjuice, to diſſolve and raiſe the Virtue of the Aromaticks in Diſtillation, made the *Sieur de Pelerin* lay aſide this Preſcription, and follow that which *Mr. Charas* has given us in his *Diſpenſatory*, Page 1030, which will appear much more reaſonable.

Mr. Charas's Treacle-Water.

Take Roots of *Gentian*, *Angelica*, *Maſter-wort*, *Valerian*, and *Contrayerva*, of each two Ounces ; Citron and Orange-Peel, not candied, but dry, fine Cinnamon, Cloves, and Juniper-Berries, of each one Ounce ; Water Germander, and *St. John's Wort* Flowers, of each one Handful : Spirit of Wine, Walnut and *Carduus* Water, of each one Quart ; fine Treacle, four Ounces ; you draw from thence a very odoriferous Water, more efficacious, and better to keep than the former. It is very proper to reſiſt all Poiſons, and prevent Infections. The Doſe is from one Drachm to four, in a convenient Liquor. Likewise it is given ſometimes alone, in a ſmall Quantity. *Mr. Charas* ſays, that there is a Treacle-Water made, by diſſolving of Treacle in equal Parts of Spirit of Wine, and Vinegar diſtilled. They alſo make Treacle-Vinegar ſometimes only by diſſolving it in ſtrong Vinegar, which is uſed againſt the Infection of the Air, to waſh the Hands, Temples, and Noſtrils with.

When the *Roman Orvietan* was firſt known in *France*, we had it from *Rome*, and ſome other Parts of *Italy*, as *Orviette*, from whence it takes its Name ; but ſince that the *Sieur Contugi* came to *Paris*, and, under Pretence of the King's Permiſſion, took upon him the whole Management of this Medicine, the Druggiſts have left off to trade in it, either thro' Fear, or becauſe the Demand for it was not conſiderable. But they afterwards underſtood, that when the King gave his Authority to the *Sieur Contugi*, to ſell and trade in *Orvietan* at *Paris*, he did not intend to ex-

clude the Druggiſts, or Apothecaries at *Paris* from making it, as has been declared by an *Arreſt*, leſt he ſhould deprive *France* of a Remedy ſo valuable and neceſſary to the Publick : As notwithstanding all the Care the *Sieur Contugi* could poſſibly take to make it in its greateſt Perfection, he never could make it ſo good as that of *Italy*, becauſe the Ingredients, which are very numerous, have not ſo great Virtues in *France* as in *Italy*, where the Heat of the Climate more exalts the Virtues of Simples than with us.

Orvietan.

Take Roots of Vipers Graſs, *Carline* Thistle, Maſter-wort, *Angelica*, Biſtore, Birthwort, *Contrayerva*, white Dittany, *Galingal*, *Gentian*, ſmall *Arabian* Coſtus, true *Acorus*, *Macedonian* Parſley-Seed, Leaves of Sage, Roſemary, Goats Rue, *Carduus Benediſtus*, Dittany of *Crete*, Bay and Juniper Berries, of each one Ounce ; Cinnamon and Cloves, of each half an Ounce ; dried Vipers with their Hearts and Livers ; old Treacle, of each four Ounces ; white deſpumated Honey, eight Pounds to make it into a Body. By conſulting of *Bate's Pharmacopœia*, you may ſee how far this Recipe differs from that which he ſays *Sir Robert Talbot* communicated to him, and which we may ſuppoſe he brought from *France*.

Of Mithridate.

Take choice Myrrh, Saffron, white Agarick, Ginger, fine Cinnamon, *Indian* Spikenard, Frankincenſe, and *Thlaſpi*, or Treacle Muſtard-Seed, of each ten Drachms ; *Marſilian* Hartwort, Baſam of *Judæa*, Camels Hay, *Arabian* *Stæchas*, *Coſtus*, *Galbanum*, *Cyprus* Turpentine, Long Pepper, *Caſtor*, Juice of *Hypocitiſtis*, *Storax* in Tears, *Opopanax*, and *Indian* Leaves, of each one Ounce ; *Caffia Ligneæ*, Poley Mountain, White Pepper, Water Germander, wild Carrots, Fruit of the Baſam-Tree, Troches of *Cephi* and *Bælium*, of each ſeven Drachms ; Celtick Spikenard, Gum Arabick, *Macedonian* Parſley, *Opium*, the leſſer *Cardamum*, Fennel, *Gentian*, red Roſes, and Dittany of *Crete*, of each five Drachms ; Aniſeed, *Aſarum*, the true *Acorus*, great *Valerian* Orrice, and Gum *Sapagenum*, of each three Drachms ; Spignel, *Acacia*, the Sea-Skink, and *St. John's Wort* Seed, of each two Drachms and an half ; *Spaniſh* Wine, a ſufficient Quantity ; fine Honey, the Weight of all the Ingredients except the Wine ; and make all into an Electuary.

Of Troches of Cippi.

Take fat Raisins, *Cyprus Turpentine*, each three Ounces; choice Myrrh, Camels Hay, each an Ounce and half; fine Cinnamon, half an Ounce; *Calamus Aromaticus*, three Drachms; *Bdellium*, Spikenard, *Cassia Lignea*, *Cyperus*, Juniper-Berries, Aloes Wood, each two Drachms and a half; Saffron, a Drachm; fine Honey, *Spanish Wine*, enough to make them into Troches. The Way of compounding Mithridate differs nothing from that of Treacle; and as to these Troches, the *Dispensatories of Bauderon and Charas* shew us the Manner of preparing them.

[In regard to all these Compositions, as they have properly no Business in a Work of this Nature, I shall not add to the Length of this Chapter, by saying any thing farther about them, especially as we have now a new *Dispensatory*, in which they are all very greatly reformed and amended]

29. Of the Sea-Skink.

Pomet. THE Sea-Skink is an amphibious Animal, pretty much like a small Lizard. It is about half a Foot long, and an Inch in Diameter, having a sharp Nose, covered with Scales. It has two little piercing Eyes, and a Mouth divided to the Place where the Ears should be seated, had this Creature any. It has a great many little white and red Teeth, and goes upon four Feet, little more than an Inch high, which are very like those of an Ape. Its Body is covered with little round Scales, different from those of the Head, which are long and large. They are greyish, inclining to brown upon the Back, and of a Silver grey under the Belly. The Body of this Animal grows still smaller to the End of the Tail, like the Viper's.

There are a great many of these little *Skinks* to be found in the *Nile* in *Egypt*, from whence they are brought us by the Way of *Marseilles*, only the Entrails are taken out, and the small End of the Tail is cut off. Chuse such as are the biggest, longest, heaviest, most dry and entire, and least worm-eaten, to which they are very subject. They are reckoned proper to restore Warmth in old Age, and Decays of Nature, to encrease the *Semen Virile*, and are one of the Ingredients of *Mithridate*.

The Reverend Father *Du Tertre* says, that he saw not only in *Guadeloupa*, but likewise in other of the *American Isles*, the true *Skinks*, altogether like those brought from *Egypt*. They are, he says, a sort of Lizard, by the Inhabitants of *Guadeloupa*

called *Maboüia*, and in some other Isles, the *Land Pike*. These *Skinks* are more fleshy than other Lizards, the Tail is thicker, and the Legs and Feet are so short, that they creep upon the Ground. Their Skins are covered with an infinite Number of little Scales, like those of Snakes, but of a yellow Colour, silvered, and shining, as if rubbed with Oil. Their Flesh is good against Poison, and the Wounds of envenomed Arrows.

Scincus Marinus, or the *Skink*, is a little *Lemery*. amphibious Animal, resembling a small Lizard, or rather a little *Crocodile*, as long as one's Hand, sometimes thicker than an Inch, covered with little Scales of a Silver Colour, especially under the Belly, having brown Streaks cross the Back; the Head is oblong, and thicker over the Jaws than the Neck; the Eyes very little; the Nose sharper than that of the Lizard, covered with Scales as the rest of the Body is; the Mouth is cut in very deep, set with a great many little white Teeth. Some Authors call it *Crocodilus Minor*, or the little *Crocodile*. It is bred in the *Nile*, and several other Parts of *Egypt*, and feeds upon aromatical Flowers. It never grows bigger than as we have it brought to us. They open the Belly and take out the Entrails, then fill it with Poley, or some other dried aromatical Herbs, in order to preserve it. This Creature affords a great deal of volatile Salt and Oil. Some People prefer the Kidneys before the rest of the Body; but there is no Difference in the Virtue of any of them.

[The *Skink* is the *Scincus*, few *Crocodilus Terrestris*, *Raii Syn. Anim.* 271. *Scincus quem et Crocodilum Terrestrum vocant. Gesn. De Quad. Ægyp.* 24. *Scincus Marinus. Mont. Ex.* 6.

It is brought to us dried from *Egypt*, but is never used except as an Ingredient in some official Compositions]

26. Of Silk-worms.

THE Silk-worms are little Insects, *Pomet.* whose Origin is altogether surprising, as well as the various Shapes and Changes they undergo. Several Authors have writ of them; and amongst the rest Mr. *Isnard*, in a little Treatise of his, at the 254th Page, gives this Account of their Original. "At the Time when the Mulberry-Leaves are ready to gather, which should be five Days after their Budding in the Beginning of the Spring, they take a Cow, which is almost at Calving, and feed her wholly with Mulberry-Leaves, without giving her any Thing else to eat of Herbs, Hay, or the like, till she has calved; and this they continue for eight Days longer;

“ longer ; after which they let the Cow and Calf
 “ both feed upon this some Days together, with-
 “ out any other Mixture, as before : They kill
 “ the Calf after it has been filled or fatiated with
 “ the Mulberry-Leaves and the Cow’s Milk ; then
 “ chop it to Pieces to the very Feet, and with-
 “ out throwing any thing away, put all together,
 “ the Flesh, Blood, Bones, Skin, and Guts, into
 “ a wooden Trough, and set it a-top of the
 “ House in-a Granary, or Garret, till it is cor-
 “ rupted ; and from this will proceed little Worms,
 “ which they lay in Mulberry-Leaves, to raise
 “ them afterwards, just as they do those which
 “ are produced from the Eggs ; and these Silk-
 “ worms are abundantly more fruitful than those
 “ from the Eggs ; so that those who deal confi-
 “ dently in them, never fail every ten or twelve
 “ Years to raise them this Way.”

There are so many Particulars relating to the Management and Breeding of these little Creatures, that it would be troublesome to dwell upon this Subject ; besides, it has no relation to my present Purpose ; and since Mr. *Isnard* has writ an entire Book upon it, I shall refer those to it who would know further. These little Animals supply us with a Commodity so valuable, that formerly those only of the best Quality were clothed with it. There are several Colours of Silk ; as white, yellow, and the like : These different Silks are found in little Balls of the Size and Shape of a Pigeon’s Egg ; and by the means of warm Water, and certain *Windles*, they wind them into Skains, and then dye them of what Colour they please.

I shall not detain you with a Description of all the different Silks that we have brought us from several Parts, contenting myself only to say, that what is used in Physick is the Natural ; that is to say, the *Ball*, or what is wound up naturally, and without passing thro’ hot Water, to which the Antients gave the Name of Raw-Silk ; or rough as it comes from the *Silk-worm*. This Silk, after it is reduced to Powder, which is not very easy to do, is brought into several Compositions, as Confections of *Alkermes*, *Hyacinth*, &c. They use likewise Silk dyed scarlet, to give to Women in Child-bed, instead of *Alkermes*. Several Authors say, that Silk has the Virtue of making the Heart pleasant, and the Spirits brisk, and to cleanse the Blood. Those who use the Balls of Silk ought to take care, before they reduce it into Powder, to cut it asunder, and take away the Worm that is within, sometimes fresh, and sometimes rotten, with the first Skin that wraps it about, as not fit to be taken inwardly ; and those who would have the best, use nothing except the Silk that is wound off, because the rest is nothing but Dross, or Refuse Stuff. It

may be reduced to Powder, by cutting it very fine, so that it will pass thro’ a Sieve ; for to beat it, will be a tedious Work ; besides it will lose half. As to the Confections of *Alkermes* and *Hyacinth*, the scarlet Silk ought to be preferred to all other, tho’ almost all Authors recommend the Raw-Silk, which is that which is white, or of a Gold Colour, and which has not been dyed.

There are several other Reptiles which we sell, as the Leeches which are found in Ponds and Ditches, and which the Surgeons apply to several Parts of the Body, and chiefly those where Cupping-Glasses cannot be easily fixed : There are several Sorts of Leeches ; the best of which are the smaller kind, which have small Heads, reddish Bellies, with Streaks upon the Back, that are of a Gold Colour. They are to be met with in clear running Water. Throw away the venomous Sort, which have thick Heads, and are of a green Colour, that shine like Glow-worms, and are streaked with blue, and found in muddy Waters ; for instead of relieving the Patient, they will cause Inflammations, Aposthumes, Fevers, and malignant Ulcers that are sometimes incurable : To keep these Leeches, put them into clean Water, that must be renewed from Time to Time ; to which some will add Sand and Earth.

We sell, besides these, the Powder, volatile Salt, and Oil of Toads, as well as the Stone that is found in the Head of the large and old ones, to which the Antients attributed great Virtues ; and Mr. *Charas* treats of it very largely, in his *Chymical Dispensatory*, Page 794 ; to which those who desire to know further may have Recourse. There are some who rank the Toad-Stone among the precious Stones, not only because it is scarce to be met with, but because it is endowed with so many excellent Virtues, being proper to resist all Sorts of Poison. The white is the most valued, tho’ those which are of another Colour, are endowed with no less Virtues : They frequently impose upon the Buyer, instead of the Toad-Stone, a little round or longish Stone, that is found in several Parts of *Europe*.

We sell likewise volatile Salt, Oil, and Powder of *Millepedes*, or Hog-Lice, to which Mr. *Charas* assigns great Virtues. The Powder is given with Success in Nephritick Cholicks, Retentions of Urine, the Jaundice, Diseases of the Eyes, and all Obstructions. Mr. *Charas* attributes also great Virtues to the volatile Salt of *Cantharides*, Earth-Worms, and Ants ; as may be seen in his *Chymical Pharmacopœia*. We sell likewise the Oils of *Scorpions*, simple and compound, which we have ready made from *Provence* and *Languedoc*, and for which we have a better Price than for those made

made by the Apothecaries at *Paris*; and which, without Dispute, are much better, because the *Scorpions* are most frequent in those Provinces. And the other Ingredients have also more Virtue there, from the Warmth of the Climate. The first or simple Oil of *Scorpions* is only made of *Scorpions* and Oil of bitter *Almonds*: The Compound is that of *Matthiæolus*, which is made of the following Drugs, viz. of *Scorpions*, old Oil Olive, the Flowers, Leaves, and Seed of St. *John's Wort*, *Germander*, *Mountain Calamint*, *Cardus Benedictus*, *Water Germander*, lesser *Centaury*, *Vervain*, *Dittany of Crete*, *Zedoary*, *White Dittany*, *Gentian*, *Tormentil*, round *Birthwort*, *Storax*, *Benjamin*, *Juniper-Berries*, *Nigella Seed*, fine *Cinnamon*, *Calamus Aromaticus*, long *Cyperus*, white *Sanders*, *Rhubarb*, *Myrrh*, *Aloes*, *Indian Nard*, *Saffron*, *Treacle*, *Mithridate*, and *White Wine*; the Quantities of these Ingredients you will find in *Matthiæolus's* sixth Book of Poisons; or in *Bauderon*, or *Charas's Dispensatory*, whereto those who desire to make it may have Recourse. This Oil is one of the most difficult Compositions in Pharmacy, because of the different Mixtures, and the Difficulty of getting the *Scorpions* alive from *Provence* or *Languedoc*.

Bombyx, sive *Vermis lanificius*, the *Lemery*. *Silk-worm*, is a Kind of Caterpillar, or a Worm as long and thick as one's little Finger, divided from one Part to another in a Sort of Rings; having under them usually fourteen Feet, six in the fore Part, which are very small, and eight on the hinder Part, which begin after the third Ring: The two last are much larger than the rest; the Shape of them is ugly to look upon; their Substance very moist and viscous. They are clothed with a very thin tender Skin, easy to break, and of a brown or whitish Colour, with some Spots. The *Silk-worm* is produced in the Spring, from a little round Egg, that is like a Poppy-Seed; is fed with *Mulberry-Leaves* fresh gathered; for if they are decayed, they kill the *Silk-worms*. When they are grown to their full Size they eat no longer, but spue out of their Mouths a kind of thick, gluey, or viscous Slaver or Foam, which they stretch, extend, and work to a *Silk Web*, and then wind into a *Clue*, that is sometimes white, and sometimes yellowish, and in this the Animal is wrapped, and lies several Days, still working till it dies; but if you do not in time throw this *Clue* into Water to draw off the *Silk*, it will quit this thick Clothing, pierce thro' the *Clue*, and arise a fine, white, gaudy, active Butterfly; and if you leave after this Manner a Number of them, you will have a diverting Sight, to see the Male and Female Butterflies

caressing, and making Love; from whence, afterwards, you have Eggs.

The *Silkworms* yield Abundance of *Flegm* and *Oil*, but little volatile Salt. They are reckoned very good to cure a *Vertigo*, if after they are dried and powdered you apply the Powder upon the Head, being first shaved. The *Silk* upon the *Clue*, before it is cast into the Water, is called *Sericum crudum*, or Raw-Silk. It ought to be cut asunder to uncover the Worm within it. This yields a little *Flegm*, a good deal of *Oil*, but very little volatile Salt and Earth. It is thought proper to recruit the Spirits, and purify the Blood, being taken in Powder. Some People hold, that if you feed a Calf with *Mulberry Leaves*, then kill and cut it to Pieces, and expose it to the Air, upon a House, it will produce *Silk-worms*; but this Thought wants Confirmation. In the Parts where they trade in *Silk*, as *Savoy*, *Languedoc*, and *Provence*, they put their *Silk-worms* in Chambers, where they are disposed in Repositories or Niches, where they make their *Clues*; good Quantities of which they preserve on purpose to have Eggs, and they throw the rest into warm Water, wherein the Worms die.

[The *Silk-worm* is the *Bombyx*, *Aldrov. De Ins.* 278. *Jonsf. De Insect.* 114. Its Origin is from the Eggs of a Female Butterfly, as all the other Caterpillars have theirs. Mr. *Isnard's* Account of their Production, is much such another Story, as *Virgil's* of the Bees, for unless the *Silk-worm Butterfly* would lay its Eggs in putrified Flesh, which it is most certain she never does, it is altogether impossible young *Silk-worms* should ever be found there. The Raw-Silk was once in esteem as a Cordial and Sudorifick, but at present is never heard of in the Shops.

The Toad is the *Bufo*, *Jonsf. De Quad.* 131. *Bufo sive Rubeta*, *Raii Syn. An.* 252. *Rana Rubeta tum Palustris tum Terrestris*, *Gesn. De Quad.* 54. The dried Toad is a good Medicine in Dropsies, being a powerful Diuretick taken in Powder from two Scruples to a Drachm.

What is commonly called the Toad-Stone, and generally believed to be taken out of the Head of the Toad, is a small Substance of various Colours, sometimes brown, sometimes black, sometimes greenish, and sometimes of a dusky green and whitish-brown marble together, concave on one Side, and convex on the other.

These Stones, as they are called, are not taken out of the Toads Head, but are the *Dentes Molares* of the Sea Wolf, the *Lupus Marinus Schonfeldii*. *Jonsf. Tab.* 47. *Lupus Marinus a stras et Schonfeldii*. *Raii Ichth.* 130. They have been formerly supposed good in pestilential Diseases, and Antidotes against

The Place where y^e Silke Worms feed & make y^e Silke.

30



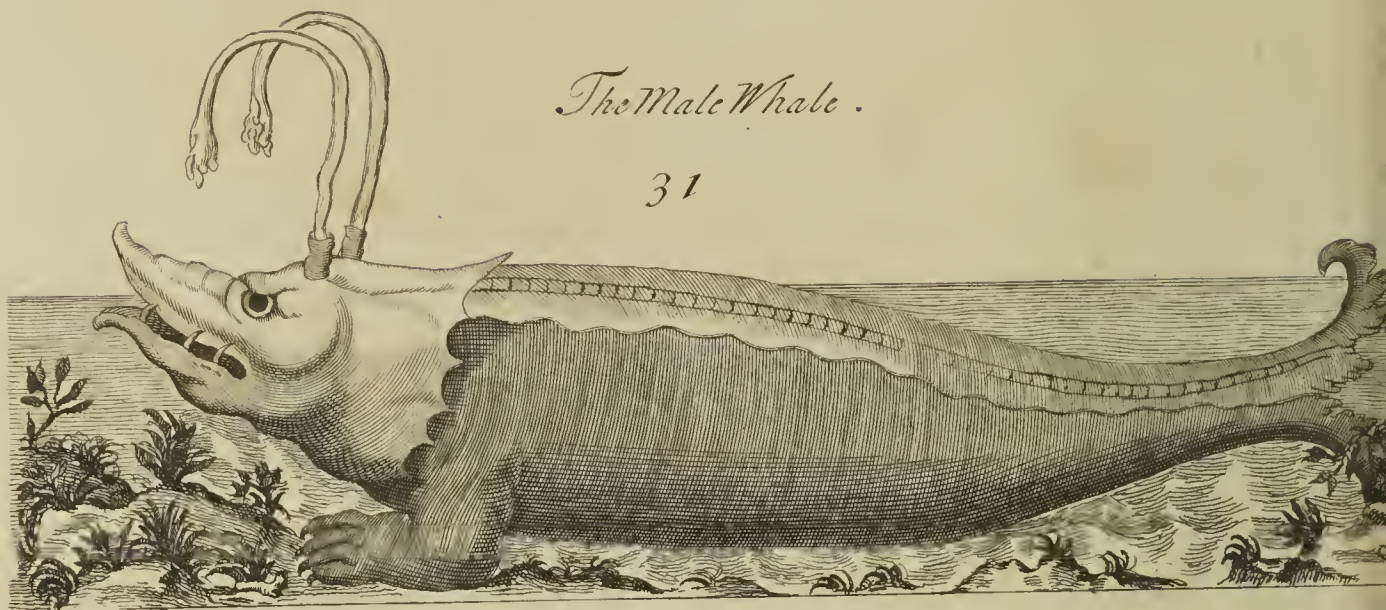
how they wind it with

And feeding in v
multitude of

distent into pieces
firm where it sticks =
Worms are bred

The Male Whale .

31



The Female Whale .



against all Kinds of Poisons, but are wholly neglected in the present Practice.

Millepedes are the *Afelli Millepedes et Onisci* of the Shops, the *Afellus lividus major*. *Raii Hist. Inf.* 42. *Onixus sive Afellus*. *Aldrov. de Inf.* 632. Of these there are many Preparations, but the best Way of taking them is certainly the swallowing them alive, and the next to that their Expression made with Wine.

The Scorpion is the *Scorpio*, *Jonsf. de Inf.* 95. *Scorpius*, *Raii Hist. Inf.* 9. It is an Animal something resembling a Crab, but smaller, it has eight Legs, and is of a black or dusky brown Colour, the Oil is much in Esteem as a Remedy against the Creatures Poison, which it may indeed easily be, by its own Virtues, whether it receive any thing from the Scorpion or not. The Ashes of them, when burnt, are also commended in the Stone and Gravel, but seldom used.]

31. Of the Whale.

Pomet. **T**HE *Whale* is the largest of all Fish, it is found in the Northern and North-West Seas. The *Skeleton* of one was shewn at *Paris* 1658, whose Skull was between sixteen and seventeen Feet long, weighing four thousand six hundred Pounds; the Jaws ten Feet wide, and fourteen Feet long, weighing each eleven hundred Pounds. The Fins, which looked like Hands, twelve Feet long, and weighing each six hundred Pounds. The Ribs twelve Feet and a half long, each weighing fourscore Pounds. The Joints of the Back, from the Head to the End of the Tail, forty five Feet long; the first Joints weighing fifty Pounds each, and the others less, according as they come nearer the End. I shall not trouble myself to give an Account of all that relates to this Animal, or the Manner of taking it, because several Authors have treated of it; but I shall only say, that there are two Sorts of Whales; the one is called *Cachalot*, which differs from that which is called the *Whale*, in that the Mouth of the *Cachalot* is furnished with little flat Teeth, without a Beard or Whiskers, which is contrary to that which commonly bears the Name of the *Whale*, which has nothing but Whiskers. These Whiskers are what we call *Whale-bone*. It is from the Fat of these Animals, that they draw *Whale Oil*, which is a very great Commodity, especially in Times of Peace, by reason of the great Use they have for it in *France*, as well for Burning, as several other Uses, wherein it is very necessary. We have two Sorts of *Whale Oil* come to *Paris*, the best of which is, that which we call Oil of the Great Bay, which is by the *French* made of the Fat immedi-

ately after it is taken from the *Whale*; whence it comes that the *French Oils* do not smell so ill as those made in *Holland*, because the *Dutch* do not make their Oils from the Fat so soon as it is drawn from the *Whale*, but bring it into *Holland* to be melted; wherefore we ought to prefer the *French Oils* to those of *Holland*, which are easily known, because the *Dutch* are red and stinking, and yet are clear. The great Quantities we have of *Whale Oil*, come from the Northern Sea, especially *Greenland*, from whence the *Hollanders* are supplied, because the greatest Number of *Whales* are found there.]

Of *Sperma Ceti*.

The *Sperma Ceti*, according both to the Antients and Moderns, and which, tho' improperly, is called so at this Day, is the Brain of a Sort of *Whale* called by the *Biscayians* *Byaris*, and by the People of *St. John de Luz*, *Cachalot*. This Animal is named by some, the Male *Whale*, and in *Latin*, *Orca*; it is about twenty five Feet long, and twelve Feet high; each of the Teeth weigh a Pound, and are very useful for several Sorts of Works: These Creatures are very common at *Cape Finisterre*, on the Coast of *Galicia*, and in *Norway*. In the Year 1688, there was one taken by a *Spanish Ship*, that carried it to *St. Sebastian's*, from the Head of which were taken twenty four Barrels of Brain, and from the Body ninety six Barrels of Fat: They ought to be undeceived who believe that *Sperma Ceti* is any thing else but the Brain of the *Cachalot*; and I can affirm this with Certainty, not only having seen this prepared, but having prepared it myself, in the following Manner.

This *Sperma Ceti* is usually prepared at *Bayonne*, and *St. John De Luz*; and this Work is so rare in *France*, that there are but a few Persons at the latter Place, who know how to prepare it. Those who perform this, take the Brain, and melt it over a gentle Fire; then they cast it into Moulds like those wherein they refine Sugar; and after it is cooled and drained from the Oil, they melt it again, and proceed after the same Manner, till it is well purified and very white; then, with a Knife made for the Purpose, they cut it into Scales or Flakes, just so as it appears when brought to us. As this Commodity is of some Consequence, by Reason of its Price, I must tell you, you ought to chuse such as is in fine white Flakes or Scales, that are clear and transparent, of the true natural Smell; and take Care that it be not augmented with white Wax, as it happens but too often, which is easy to distinguish, as well from the Smell of the Wax, as because it is very thin, and of a more unpolished white.

white. Likewise carefully observe, that it be what is made of the Brain of the Whale, because that which is made of the Fat, is very apt to turn yellow, and this is the Reason we sometimes meet with *Sperma Ceti* that immediately turns yellow on being exposed to the Air; we have no Commodity which is so sensible of the Air as this, which is the Reason why it ought to be carefully kept in Glasses, or in Barrels, close stopped from the Entrance of any Air, lest this Drug turn yellow. It dissolves easily in unctuous Liquors, and is therefore a common Ingredient in Pomatums, and other such Compositions. Women in Child-bed take of it, to a Spoonful, to remove After-pains, and assist their Cleansings; and it is an excellent Remedy in Bruises, Inflammations, Pleurifies, or the like, taken with Syrup of Violets, Oil of sweet Almonds, &c.

Balæna, *sive Ceta*, *sive Cetus*, or the *Lemery*. *Whale*, is a vast Fish bred in the Northern Seas, whereof there are many Kinds. From the Flesh of this they make the *Whale* or *Train Oil*; and from the Brain of a Sort of Male Whale, which they call the *Orca*, *Byaris*, or *Cachalot*, is made what we call *Sperma Ceti*. The Fish is common along the Coast of *Galicia* in *Spain*. When the Brain is separated from the Head, they melt it with a gentle Fire, and cast it into Moulds to cool; then they separate the Oil, and so repeat the Work till the Matter is clear and white; after which they divide it into Scales or Flakes for Sale. This was called *Sperma Ceti*, because the Antients believed that it was the Sperm of the Whale that floated on the Sea. Several Moderns have rejected this Opinion, but would establish another which is as foreign from the Truth as the former. They say that the *Sperma Ceti* is a *Sea Bitumen*, or a kind of Sea Froth, that is driven by the Waves to and fro. It is astonishing that the Origin of this has been a Secret so long; for it is not above two and twenty Years, since it was known that this was drawn from the Head of the Whale. The *Sperma Ceti* is resolute and mollifying. They use it in Pomatums to soften and smooth the Skin; in Ointments or Liniments, to dissolve the Hardness of the Breasts: In Injections of the Womb, to soften the same; and it is given inwardly, to correct the Acrimony of Humours in the Breast or Belly. The Dose from half a Scruple to two Scruples.

[The common Whale from which we have the *Train Oil*, and Whale-bone, is the *Balæna vulgaris*. *Ald. de Pisc.* 688. *Balæna vulgaris edentula dorso non pinnato*. *Raii Syn. Pisc.* 6. *Balæna major laminas in superiore maxilla habens bipennis*, *Fistula carens*. *Sib. Phal.* 27. *Balæna vulgo*

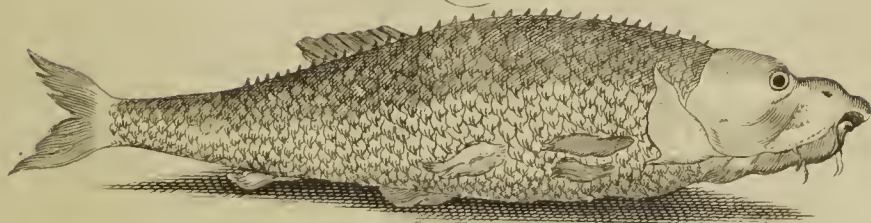
dicta, *sive Mysticetus Aristotelis Musculus*, *Plinii, Gesn. de Aquat.* 114. It is common in the Northern Seas. The *Train Oil* is made from its Fat, and the Whale-bone, as it is called, is found in its Mouth in *Laminæ* of a horny Substance.

The *Sperma Ceti Whale* is the *Balæna macrocephala quæ binas tantum pinnas laterales habet*. *Sib. Phal.* 12. *Balæna major inferiore tantum maxilla dentata macrocephala bipennis*. *Raii Syn. Pisc.* 15. It is principally caught in the *Greenland* and *Iceland* Seas. What we call *Sperma Ceti* used to be prepared from a natural fat Substance, found in the Ventricles of the Brain, the Diploe of the *Cranium* and circumjacent Parts of this Fish; sometimes by simple Meltings as described by our Author, and sometimes by boiling in a strong *Lixivium*, till all the Humidity being evaporated, a white solid Matter, like Soap, remained; this being cleansed from the coarse Oil, and Salts of the *Lixivium*, by repeated Meltings and Washings, they divided with Knives, into *Laminae*, as we see it. But of late, they have found a Way of making it out of any sort of Oil.]

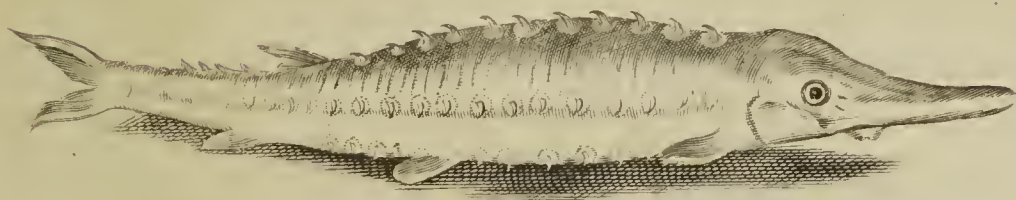
32. Of the Fish-Glue, or Isinglass.

THAT which we call *Fish-Glue*, or *Isinglass*, the *Latins*, *Gluten Al-* *Pemet-*
kanac, the *Greek*, *Ichthyocolla*, and the *Arabs*, *Alcana*, is the mucilaginous Part of a Fish, whose Back is full of little white Scales that are prickly and ranged in Order, commonly found in the *Muscovy* Seas; which is the Reason that almost all the *Isinglass* we have from *Holland*, is brought thither from *Archangel*, where is kept a famous yearly Fair. Several who have writ of this Fish whereof they make the *Isinglass*, and among others, *Rondelet*, have said that it has no Bone, which is the Reason why it is called the Fish without Bones. They have pretended also, that it has no Prickles, which is very wide of the Truth, because the Back of it is so well furnished with them, that there is not any Fish, how strong soever, will dare to bite it; the Scales, though they are small, are very sharp, as represented in the Cut, which I had engraved from the Original which I have in my Hands. The Antients imagined, that it was of the cetaceous Kind, that is to say, that it resembled in Nature and Bulk, the Whale or Dolphin, because the Head is very thick, heavy, and large, the Mouth very long and open, and that there grows to the Upper Jaw a certain long Excrecence, hanging down like a Beard. As to the Flesh, it is sweet and gluey, and consequently of little Relish, if it be not salted some Time before it is eat.

of Animals
32
The Sing-glass Fish



The Silurus.



33

The Sea Unicorn



As to the Manner of making the *Isinglass*, the sinewy Parts of the Fish are boiled in Water, till all of them be dissolved that will dissolve; then the gluey Liquor is strained, and set to cool. Being cold, the Fat is carefully taken off; and the Liquor itself is boiled to a just Consistency, then cut into Pieces, and made into a Twist, bent in Form of a Crescent, as commonly sold, then hung upon a String, and carefully dried. That which is clearest and whitest is best; and which being boiled in Water and Milk, will almost all dissolve. It is chiefly made in *Muscovy*; and that which is called the Patriarch Sort, which is four square, very thin and white, almost transparent, is the choicest; the next is the *Czar's* Sort, which is the large Horse-shoe, or twisted Kind, that is in thin Rags, and clear; a meaner Sort is that which is yellow and brown within; and that in square Books or Cakes, is the worst of all.

The Use of *Isinglass* is very common in *France*, but not in *Physick*; for I believe, besides what is used in making the *Diachylon* Plaister, that all the Apothecaries in *Paris* scarce use a Pound in the Year: But it serves the Wine-Merchants and Vintners, who use it to fine their Wines, for which formerly they were blamed, though without Reason. For it is a very great Error that has been received, that *Isinglass* was a poisonous Drug, when nothing is so certain as that it has no ill Quality whatsoever; but the Fish from whence it is made is one of the principal Foods of *Muscovy*, the Jelly being very wholesome; the Flesh of the Back of this Fish tastes like Veal, and is very nourishing; the Belly eats like Pork, being very sweet and good. *Isinglass* is of a healing and strengthening Property; used in Broth and Jellies, it strengthens the Back, stops a Dysentery and continued Purging. It is good in *Gonorrhœa's*, and the *Fluor albus*. Being of an alcalious Nature, it affords Acids, and eases the most inveterate Pains of the Stomach. The necessary Uses to which this is put, are in several Sorts of Silk Works, to give a Lustre to Ribbons and other Silks, and to whiten Gauzes. It is a principal Ingredient in the counterfeit Oriental Pearl. We have from *England*, *Holland*, and other Parts, a sort of *Isinglass* folded in little Books, that is of small Use in *France*, because it is very hard to dissolve, and never white. Some Persons have assured me, that it was made of the Remainder of that which is made in little Wreaths; and others will have it, that it comes from the mucilaginous Parts of a Fish some Authors call *Silurus*, or *Sturio*, the *Sturgeon*, which is a very scarce Fish in *France*. It is sometimes to be met with in our Rivers; but because of its Rarity, and its being excellent Meat, those

who find them sell them for three or four Hundred Livres.

Ichthyocolla, *Isinglass*, or *Fish-Glue*, is a Paste or Glue made of the Skin, *Lemery*. Fins, Tail, Entrails, Sinews, and other mucilaginous Parts of a great Sea-Fish, called *Huso*, or *Exoffis*, from being without Bones, that is twenty-four Feet long, and weighs four Hundred Weight. It is usually met with in the Seas about *Muscovy*, in *Hungary*, and other Parts of the *Danube*. They make the *Isinglass* by cutting all these Parts of the Fish in Pieces, which they steep in hot Water, and then let it boil over a gentle Fire till it is dissolved, and reduced into a Jelly. They spread this upon Instruments made for the Purpose, that it may dry, and be made into a Kind of Parchment. When it is almost dry, they usually roll it up into Wreaths of different Shapes and Sizes. The *Dutch* furnish us with almost all we use.

[The *Isinglass* Fish is the *Ichthyocolla*. *Rond. De Pisc.* 2. 177. *Raii Ichthyogr.* 244. *Huso Ichthyocolla*. *Schrod.* 5. 329. It is caught in the *Danube*, *Volga*, and other great Rivers; but it is to be observed, that *Isinglass* is not made from this Fish only, great Quantities of it being also boiled from the *Huso Germanorum*; a Fish very different from this, though generally confounded with it. The *Isinglass* is unquestionably the best, as well as most safe, and innocent thing used in purifying Wines; and in Medicine it is admirable in all Disorders that arise from too thin and sharp a State of the Fluids.]

33. Of the Narwal, or Sea Unicorn.

THE Narwal, so called by the *Islanders*, and by some others, *Rhoar*, by us the *Sea Unicorn*, is a large Fish, which some reckon to be a Sort of Whale; it is found plentifully in the Northern Seas, especially along the Coast of *Iceland* and *Greenland*. This Sea-Monster carries at the End of his Nose a white weighty Horn, that is smooth, and of a spiral Figure. It is of different Sizes and Weight, as may be seen in the Cabinets of the Curious; as that of Mr. *Morin*, Physician to the late *Mademoiselle de Guise*, which I have seen and handled, and which is represented in the Figure. And Mr. *Charas* told me, he had one longer and thicker than that in the Treasury of *St. Denis*. They are the Pieces of this Horn, that we sell at *Paris*, as they do elsewhere, for the true Unicorn's Horn, to which some People assign large Virtues, which I shall neither authorize nor contradict, having never had sufficient Experience of it.

There is another Fish besides, that they give the Name of the *Sea Unicorn* to, which is met with in different Parts of the World. Mr. *Dumantel* says he saw a prodigious one, in an Isle near *St. Domingo*, in the Year 1644. This *Unicorn*, says he, pursued a smaller Fish with that Violence, that he threw himself out of the Depth of Water necessary to swim in, and ran himself upon a great Bed of Sand, where half of his Body being uncovered, he could not recover himself to get into the Deep again, and by that means the Inhabitants of the Island took him. This Fish was about eighteen Foot long, and of the Thickness of an Hog'shead. About the Middle he had six great Fins, that at the Ends were like Oars; two of them were placed instead of Ears, and the other four along the Belly, at equal Distance, being of a Vermillion Colour; and all the Body was covered with large Scales, as big as a Crown Piece, which were of a Blue, that appeared to be spangled with Silver. Near the Neck the Scales were brownish, more compact and close, and made a sort of Collar; the Scales under the Belly were yellow: The Tail was forked, the Head a little thicker than that of a Horse, and almost of the same Shape; it was covered with a hard brown Skin. And as the *Unicorn* has a Horn on the Forehead, this *Sea Unicorn* has one perfectly fine, nine Feet and an half long, that stands directly on his. It is exactly straight, and grows taper from the Front of the Head, or Basis of the Horn, to the Tip, where it is so sharp, that with Force it will drive through the hardest Body. The thick End was about sixteen Inches Circumference; and from hence to about two thirds of this wonderful Horn, it was fashioned like the Screw of a Press, or rather waved in Form of a twisted Column, saying that the Furrows were still lessened until they became altogether smooth about four Feet two Inches from its Original. The Bottom was covered with an ash-coloured Skin, that had on it a little short Hair as soft as Velvet, of a Fillenot Colour, but underneath was as white as Ivory. As to the other Part that appeared altogether bare, it was naturally smooth, and of a shining black, marked with some fine white and yellow Streaks, and so hard, that a good File could scarcely touch it. The Creature had no Ears erected, but two great Gills, as other Fish; the Eyes being of the Size of an Hen's Egg. The Apple of the Eye was of a Sky-blue, enamelled with Yellow, and surrounded with a Vermillion Circle, that was succeeded by another very clear one, that shone like Crystal. The Mouth, like that of the Horse, was cleft and set with several Teeth; those before being sharp; and the others in the Jaws behind

large, and raised with little Bunches. The Tongue was of a proportionable Length and Thickness, which was covered with a rough red Skin.

This prodigious Fish had, besides, upon its Head, a kind of Crown raised above the rest of the Skin two Inches or thereabouts, made in an oval Form, and ending in a Point. Above three Hundred People of the Isle eat plentifully of the Flesh of it, and found it very delicate. It was larded with a white Fat; and being boiled, it parted into Flakes like Cod Fish, but had a much more savory Taste.

The Head and Horn of this Fish were preserved some Time in that Island, but being afterwards made a Present to a curious Person, the Ship in which he was bringing them over was lost, and in it this precious Rarity.

We ought to undeceive those who believe that what we now call the *Unicorn's Horn*, the *Latins*, *Unicornis*, and the *Greeks*, *Monoceros*, is the Horn of a Land Animal, whereof mention is made in the *Old Testament*, since it is nothing else but the Horn of the *Narwal*, which, as to the Choice of it, ought to be the whitest, largest, and heaviest. Some Time ago these Horns were so rare, that Mr. *Racq*, a Physician at *Florence*, said that a German Merchant sold one of them to a Pope for 4500 Livres, which is very much different from what they are at present, since we can buy the very finest at a much easier rate.

Narwal, *Rhoar*, or the *Sea Unicorn*, is a very large Fish, that carries upon his Front a Horn of five or six Feet long, that is heavy, white, smooth, and twisted, being of a spiral Figure, and hollow within, very like Ivory. He carries this for his Defence, and with it will attack the biggest Whales. This Horn affords a great deal of volatile Salt and Oil; is cordial, sudorifick, and proper to resist Infections, and cure Epilepsies. The Dose is from half a Scruple to two Scruples. They wear it also in Amulets hung about the Neck, to preserve them from infectious Air. Those who keep these for Curiosities, have the Horn entire, and chuse the longest and most weighty.

[The *Narwal* and *Unicorn's Horn* I have already spoken of in the Chapter of the *Unicorn*.

As to this other Kind, I am afraid Mr. *Dumantel's* Story is too strange to be true, no Author of any Credit having ever seen or mentioned any such Fish.]

34. Of the Sea-Horse.

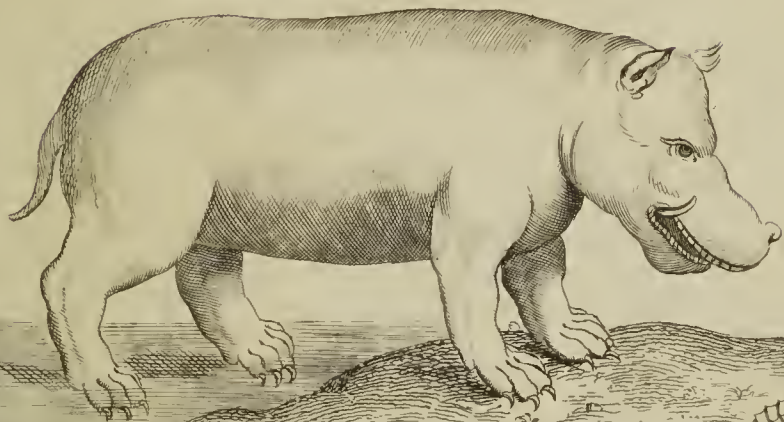
THERE is in the Rivers *Nile* and *Pomet. Niger*, and others of *Africa*, an Ani-

mal

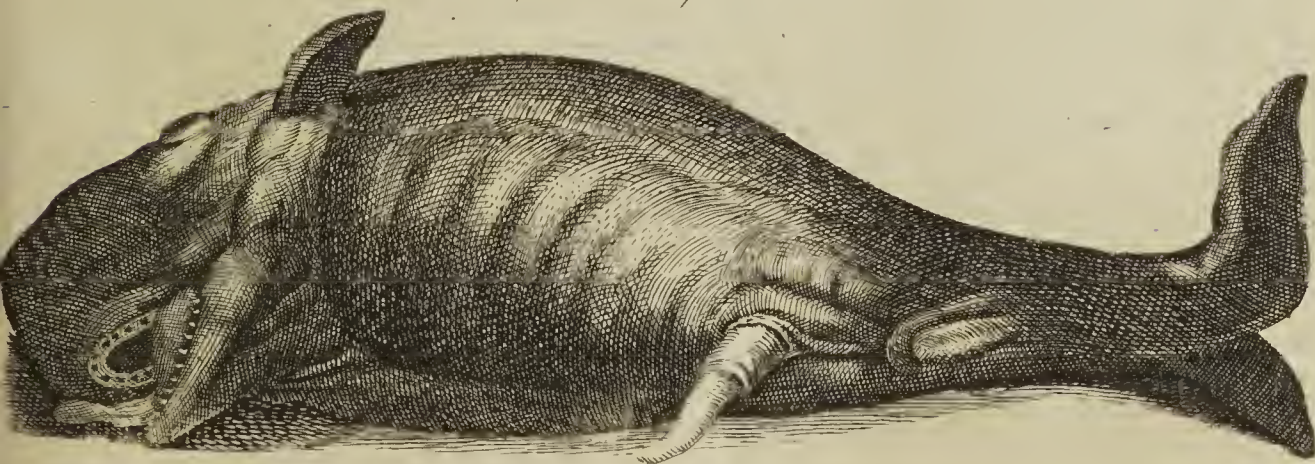
of Animals.

The Sea Horse.

34



The Whale



mal that has some Resemblance to an Ox, which I thought proper to give you the History of, upon Account of the Teeth which we sell. This Animal has nothing of the Likeness of a Horse; but as to his Size rather looks like an Ox, and his Legs are like the Bear's. He is about thirteen Feet long, and four Feet and an half broad; and three Feet and an half high from the Belly, which is rather flat than round; the Legs are three Feet about, and each Foot is a Foot broad, the Head is two Feet and an half in Breadth, three Feet long, nine Feet about, and looks very thick in respect of the rest of the Body; the Mouth is a Foot wide, the Nose is fleshy, and turns up; the Eyes are small; the Ears little and short, not above three Inches long; the Hoofs are cleft into four Parts, and the Tail is like that of a Hog; the Nostrils are winding, and about two Inches and an half deep, the Muzzle has some Resemblance to that of the Lion or Cat, and is hairy, though there is no Hair upon the rest of the Body. It has sixteen Teeth in the Under-jaw; and the two which are at the End are half a Foot long, and two Inches and an half broad, and half a Foot thick; on each Side one may also see seven Grinders that are short, but thick; it has also as many in the Upper-jaw, which it moves as the Crocodile: Its Teeth are as hard as a Flint Stone. The Antients believed that this Animal emitted Fire when he ground his Teeth one against the other.

The *Æthiopians*, and other People of *Africa*, eat the Flesh of them; and they are an amphibious Creature, living both on the Land and in the Water. Father *Vandenbroeck* says he saw four Sea Horses feeding in the Country of *Lavango*, during his Journey to *Angola*, which were like huge Buffalo's; their Skins were very shining; their Heads like a Mare's; their Ears short, and their Nostrils large; having two Tusks in their Mouths like the Boar's. Of all the Parts of this Animal, there is nothing used in *France* but the Teeth, with which, by reason of their Whiteness and Hardness, they make artificial Teeth for People who have lost them. Though *Matthiæus* says, that the Ashes of the *Hippopotamus*, or Sea-Horse, incorporated with Tar, or other fat Body, will make the Hair grow. The Tooth worn, or a Ring made thereof, helps the Hemorrhoids, and easeth the Tooth-ach. A Ring made of the Pizzle, and worn, is said to cure the Cramp. And the Testicles have the Virtue of *Castor*.

Hippopotamus, or the *Sea-Horse*, is a *Lemery*. four-footed Animal, as big as an Ox.

The Head is very thick, resembling more that of a Calf than a Horse; the Mouth is a Foot long, and the Jaws set with strong hard

Teeth, that will strike Fire like a Flint with Steel, and are very proper to make artificial Teeth with. These Creatures delight to live in the large Rivers within Land, that they may enjoy both Land and Water, feeding upon Fish, Flesh, Plants, Pulse, and even Men, Women, and Children, if they can meet with them. The Skin is so thick, that it is able to defend from all manner of external Violence, no Bullet or Spear being able to pierce it; the Ashes whereof take away Spots from the Skin; and the Fat, applied to the Pulse or Stomach, relieves against Fits of the *Ague*, and is emollient and nervous.

[The *Quadruped*, called the *Sea-Horse*, is the *Hippopotamus*. *Jonsf. De Quad.* 67. *Raii Synops. Animal.* 123. *Mont. Ex.* 5. The Testicles and Teeth of this Creature have had many Virtues ascribed to them, but are never used at present.

The other *Sea-Horse*, as it is called, which is often kept by the Druggists, and hung up as a Curiosity in the Shops of Country Apothecaries; and which our Author has figured in the same Plate with the former, though he has given no Account of it, is the *Hippocampus*, *Rond. De Pisc.* 2. 114. *Raii Ichtiogr.* 157. *Bellon. De Aquatil.* 446. It is an odd shaped little Fish, caught in the *Mediterranean*. It is the Ashes of this, and not of the *Hippopotamus*, which *Dioscorides* recommends, mixed with Tar, to make the Hair grow.

It has also been said to be a Remedy for the Bite of a mad Dog, but at present it is never used.]

35. Of the Sea-Cow.

VACCA Marina, *Manati*, or the *Sea-Pomet*. Cow, according to the Relation of

Father *Du Tertre*, is a Fish altogether unknown in *Europe*. It is sometimes from fifteen to sixteen Feet long, and seven or eight Feet about; it has the Muzzle of an Ox, and the Eyes of a Dog. The Sight is very weak, and it has no Ears, but in their stead two little Holes, wherinto one could scarcely put a Finger; by these Holes it hears so exquisitely, that the Weakness of the Sight is sufficiently supplied by the Quickness of the Hearing. Under the Belly, next the Head, are two little Feet in form of Hands, having each four short Fingers and Nails, and therefore it was by the *Spaniards* called *Manati*, which is to say the Fish with Hands. From the Navel it grows less and less, till it forms the Tail, which is in the Shape of a Baker's Peel. It is a Foot and an half broad, five or six Inches thick, clothed with the same Skin as the Body, and entirely made up of Fat and Nerves. This Fish has no Scales.

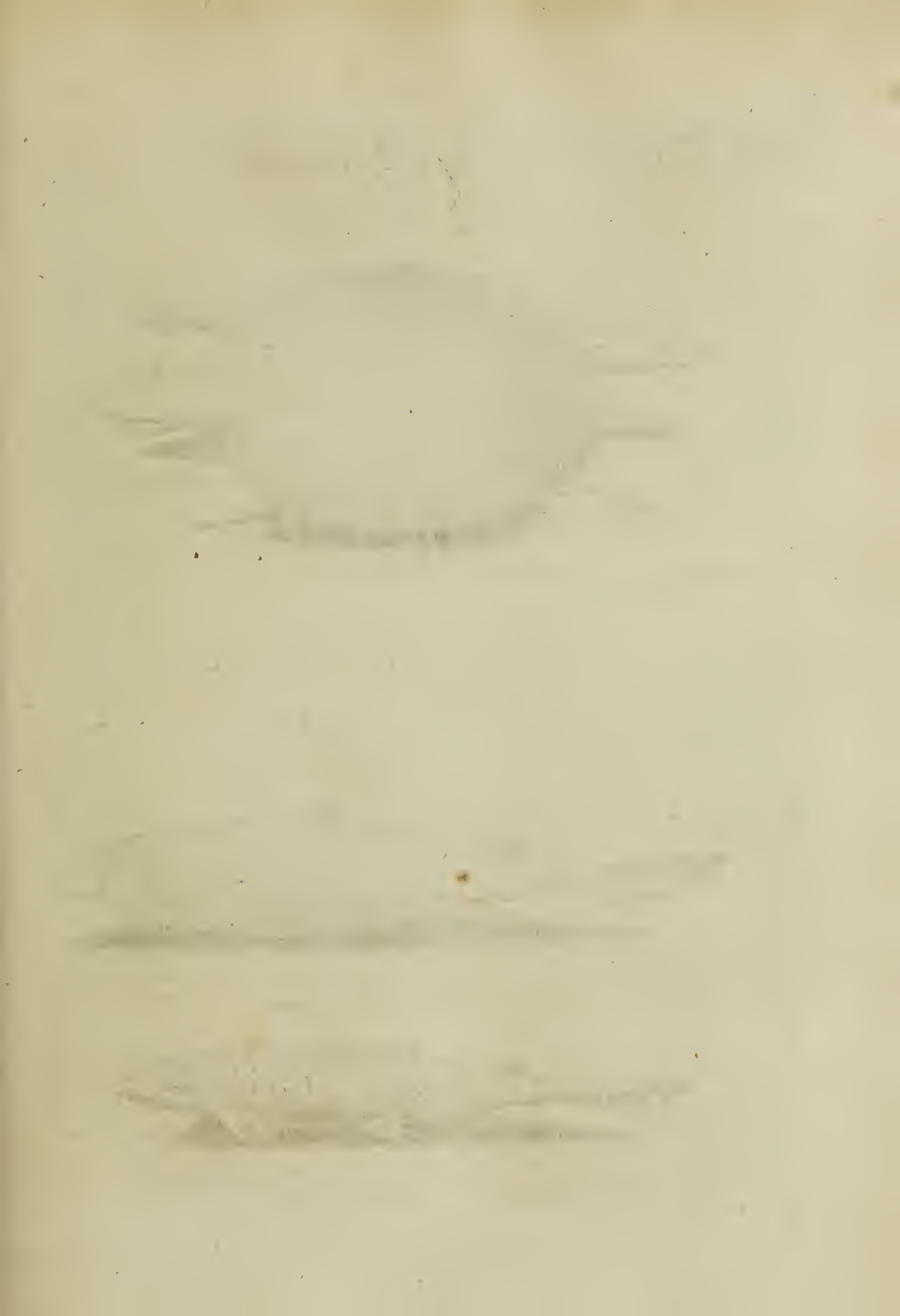
other Fish, but is covered with a Skin thicker than that of an Ox; the Hide is of a very brown Slate Colour, like that of the *Sea-Wolf*. The Flesh tastes like Veal, but it is a great deal finer, and covered, in several Parts, with three or four Fingers thick of Fat, of which they make *Lard*, as they do of Hog's. This is excellent, and several People melt it and cast it into Cakes, which they eat with Bread instead of Butter.

The Flesh of this Animal being salted, loses much of its Taste, and becomes as dry as Wood; but I believe that must be attributed to the Salt of the Country, which is very corrosive. They find in the Head of this Animal four Stones, two large ones, and two small ones, to which they assign the Property of dissolving the Stone in the Bladder, and bringing away of Gravel from the Kidneys; but I cannot approve this Practice, since this Medicine is too emetick, and acts upon the Stomach with too much Violence. The Food of this Fish is a small Herb that grows in the Sea, which it feeds upon as the Ox does on those of the Field; and after having glutted itself with eating, it hunts out for the fresh Water up the Rivers, where it drinks plentifully twice a Day. After having eat and drank its Fill, it lies sleeping, with the Snout or Muzzle half out of Water, whereby it is discovered at a good Distance by the Fishermen, who presently set about to take it after the following Manner:

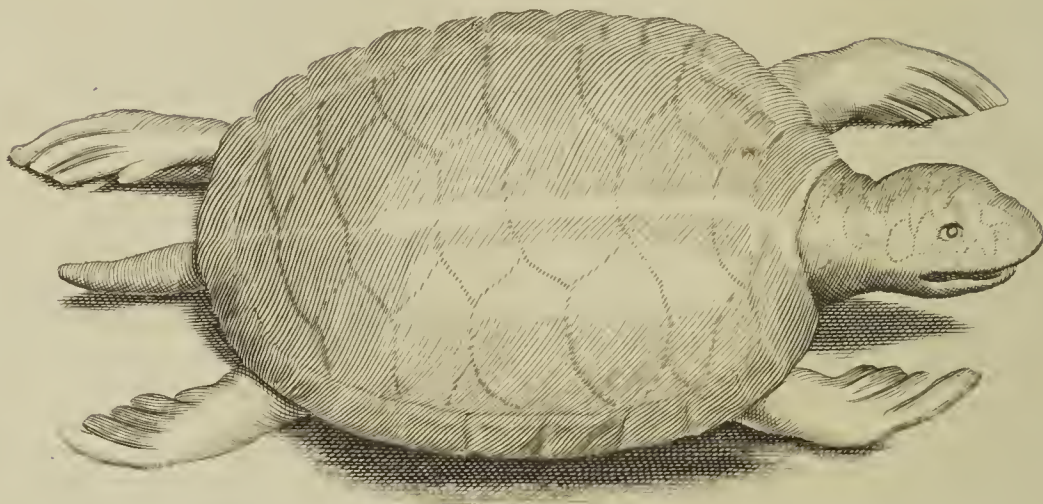
Three or four Men, or sometimes more, take a little *Canoe*, which is a small Boat, all of a Piece, hollowed out of a Tree, in Shape of a Shallop: The Rower is upon the Stern of the *Canoe*, where he so manages the Flat of his Oar, moving it in the Water, as not only to direct the *Canoe*, but to move it forwards so swift, as if carried by a Sail before the Wind. The Spear-man, which is he that strikes the Beast, stands upright on a little Plank, at the Head of the *Canoe*, holding the Spear in his Hand, which is a Sort of Pike; at the End of which is fixed a Harping-Iron, or Javelin. The third sits in the Middle of the Boat, to manage the Line or Cable, that is tied to the Harping-Iron, to draw when the Beast is struck; they all keep perfect Silence, because this Creature hears so exquisitely, that a Word, or the least Noise of the Water dashing against the Boat, is enough to awake her, and put her to Flight, and disappoint the Fishermen of their Hopes. It is diverting to see how the Spear-man trembles, as it were, for fear the Prize should escape, and fancies the Rower, or Steersman, does not employ half his Strength, though he does whatever he can with his Hands, and keeps his Eye fixed on the Spear, by the End of which the Spear-man points out the Tract

he must keep, to come at the Place where the Fish lies fast asleep. When the *Canoe* is within three or four Paces of it, the Spear-man gives a Stroke with all his Strength, and darts the Iron at least half a Foot into the Flesh; the Shaft falls upon the Water, whilst the Iron Head remains sticking in the Breast, which is now half taken. When this Animal perceives herself so violently struck, she musters up all her Strength, and makes use of it to escape; she bounds like a Horse broke loose, cuts the Waves, as an Eagle does the Air, and makes the Sea foam, covering it with white all the Way through which she passes, believing the while she is escaping from her Enemy, whom notwithstanding, she carries along with her; insomuch that one would take the Spear-man for *Neptune* drawn in Triumph by a Sea Monster. In short, after having thus, for some time, drawn her Destruction after her, and lost a great Share of Blood, her Strength fails her; and being as it were brought to Bay, she is forced to stop short to take a little Rest; though she no sooner lies by, but the Spear-man, to bring himself nearer, draws the Line, and makes a second Stroke with more Violence than the former, at which she is able to make but slender Efforts, and in a little Time is reduced to an Extremity, and then the Fishermen easily enough drag her a-shore at the first little Island they come at, where they put her into the *Canoe*, if big enough to hold her. The Female of this Species has two young ones at once, and has under her Belly two Teats which they suck; the young always follow the Dam so closely, that when they catch her they are also sure of them. The Flesh of this Animal makes a considerable Part of the Food of the Inhabitants of those Countries: They carry several Ship-Loads of it every Year from the *Terra firma*, and the neighbouring Isles; and as well at *Guadaloupe*, *St. Christopher's*, *Martinico*, as other adjacent Islands, they sell a Pound of it for a Pound and a half of Tobacco.

The Stone taken from this Animal has many medicinal Uses assigned to it, and was a Thing unknown to the Antients. It is a whitish Stone, or rather a Bone taken out of the Head that is white and hard; sometimes like a Tooth, and somewhat resembling the whitest Ivory, but much harder. It is a fixed *Alkali*, absorbs Acids, eases the Pain of the Stomach, cures Heart-burnings and the Cholick; is good against Stone and Gravel, and to expel Urine. The Powder is made by Levigation, and is given from a Scruple to a Drachm. The Calx is made by calcining it either alone, or with Sulphur and Nitre. Dose from half a Drachm to a Drachm, in any appropriate Liquor.



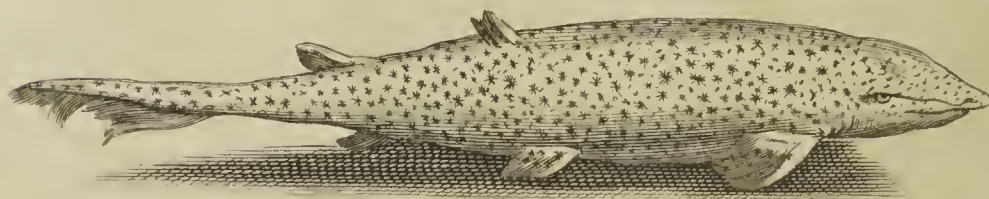
of Animals.
36
The Sea Tortoise.



37
The Sea Dog.



The Reufette.



Manati, vel Vacca Marina, the *Sea-Lemery*. Cow, is a large Fish of *America*, of fifteen or sixteen Feet long, almost round, being five or six Feet Diameter, of a frightful Figure. The Head is like a Calf's, but the Snout is more meagre, and the Chin thicker; the Eyes are small, and require a great Light, for the Sight is very weak; the Ears are nothing but two little Holes, though the Hearing is very fine. The Skin is used to make Shoes of; the Fat or Lard, besides that the Inhabitants eat it for Butter, is a good Emollient, and discussing Unguent. The Stones taken out of the Head, which are of two different Sizes, are reckoned emetick; though they are given inwardly in Powder, to twelve Grains and upwards, for nephritick Pains, and Stone in the Kidneys and Bladder.

[The *Sea-Cow* is the *Manati Indorum*, *Ald. De Pisc.* 728. *Manati Phocæ Genus. Clus. Evot.* 132. *Manati seu Vacca Marina. Raii Syn. An.* 193. It is an amphibious Creature, and feeds on Vegetables.

The Stone of the Head, as it is called, is the *Os Petrosum*, which has been greatly commended, but it is at present never used.]

36. *Of the three Kinds of Tortoises, viz. The Frank or True Tortoise, the Kaouanne, or Great-headed Tortoise, and the Caret, or Least Tortoise.*

Pomets THE Figure which I have given of the *Tortoise* is so exact, says the Reverend Father *Du Tertre*, that it would be losing of Time to give any Description of its Shape; and I shall think it sufficient to describe what is peculiar to those of the Isles, and what distinguishes them from the *European* Sort. We may say in general of the three Sorts of *Tortoises*, that they are dull, heavy, stupid Animals, and almost without Brains; for in all the Head, which is as big as a Calf's, there is not found above the Bigness of a small Bean of Brain: Their Sight is excellent; their Bulk so large, that the Shell they carry on their Backs is sometimes five Feet long, and four broad: Their Flesh, particularly that of the *Frank Tortoise*, is so like that of an Ox, that a Piece of *Tortoise* compared with a Piece of Beef, cannot be distinguished but by the Colour of the Fat, which is of a yellowish green. There are of these *Tortoises*, which taken from the Bone yield half a Barrel of Provision, without taking in the Head, the Neck, the Feet, the Tail, the Guts, and the Eggs, which are sufficient to feed thirty Men. Besides which, they make from the superfluous Fat, fifteen or twenty Pots of Oil, which is as yellow

as Gold, excellent for frying withal, and all sorts of Sauces, especially when new; for when old it is fit for nothing but Lamps. The Flesh of the *Tortoise* is so full of vital Spirits, that being cut in Pieces over Night, it will stir the next Day.

I believed a long Time that the *Tortoises* of these Parts had three Hearts; for from the upper Part of the Heart, which is as large a Man's, proceeds a large arterial Trunk, to which are joined two other, as it were, Hearts, on each Side one, about the Size of an Hen's Egg, and of the same Shape and Substance with the former; though I have since changed my Opinion, and believe firmly that they are nothing but the Ears of the Heart; yet be that as it will, 'tis certain that when rightly displayed upon a Table, it makes the Resemblance of a *Fleur-de-Lis*, which may be reckoned a good Omen of the future Success of the *French Colonies* in *America*, since the Providence of God, which does nothing in vain, has planted, as it were, the *Fleur-de-Lis* in the Heart of this Animal, as the Hieroglyphick of this Country.

Of the Kaouanne, the Loggerhead, or Great-headed Tortoise.

This differs from the true *Tortoise*, in that the Head is much larger, in Proportion to the Body, than that of other *Tortoises*; it is more mischievous than the other Kinds, and defends itself with its Mouth and Feet when they are about to take or turn it: And though it is much the largest of the three Sorts, it is notwithstanding the least esteemed, because the Flesh is black, of a Sea-Smell, and an ill Taste. Those who fish for it mix it with the true *Tortoise* to get a Price for it, but it communicates its ill Taste to it. The Oil made from it is acrid, and spoils the Sauces with which it is mixed, and is only used when the other cannot be had: However, it is not altogether useless, because it serves to burn in Lamps.

Sometime after the Shell of this Kind of *Tortoise* is taken off, when the Cartilages begin to rot, there fly off from it eight Flakes much larger than those of the *Caret*, but thinner and marbled with black and white. They are used in some Kinds of Work, and if they were thicker, would vye with the *Caret* Shell.

Of the Caret, or Small Tortoise.

The *Caret* is the least of all the three Kinds of *Tortoises*. The Flesh of it is not so good as that of the *Frank Tortoise*, but is a great deal better than that of the *Kaouanne*; the Oil drawn from it is excellent for Weakness of the Nerves, *Sciatica*

tica Pains, and all cold Defluxions. I know Persons who have found it very useful for Diseases of the Kidneys, caused by over-straining, &c. but that which makes it particularly valuable, is the Shell upon its Back, that is worth ten Shillings a Pound. What they take of this from the *Caret* consists of thirteen Leaves or Plates, eight of which are flat, the other five hollow or bending; of the flat there are four large ones, which are a Foot long, and seven Inches broad. The fine *Caret Tortoise* Shell ought to be thick, clear, transparent, of the Colour of Antimony, and marbled brown and white. There are of them that bear six Pounds of Flakes of this Shell upon their Backs; they make Combs and other fine Works of them, that are very beautiful and valuable. The Way of raising the Flakes from the large Shell, which is properly the *Tortoise's* House, is by making, when all the Flesh is taken out, a Fire underneath; and as soon as the Heat affects the Flakes, they are easily raised with the Point of a Knife.

Testudo, the *Shell-Fish*, or *Tortoise*, *Lemery*. is an aquatick four-footed Animal, that is very ugly in all its Limbs, but covered with a fine large Shell, smooth, hard, bony, oval, and marbled, or stained with several Colours. This Creature may be reckoned amphibious, living upon Land and in the Water. There are different Sizes of them; but those in *America* are often met with of five Feet long, and four Feet broad; their Flesh is good Food, and has the Taste of Beef, and yields a yellow Oil, very proper for the Lamp. The *Europeans* use the *Tortoise* Flesh in their Kitchens as good Meat. They abound with a great deal of volatile Salt and Oil, are proper for Diseases of the Breast, and Consumptions; and are very restorative being eaten in Substance, or else the Broth of the Flesh. The Blood dried, is esteemed in epileptick Fits; the Dose being from twelve Grains to a Drachm.

The Way of Fishing for the Tortoise.

There are three Ways of *Tortoise* Fishing, viz. in coupling Time, with the Spear, and when they come ashore. The *Tortoises* begin to couple in *March*, and continue it till the Middle of *May*. I shall not take Notice of all the Circumstances that relate to this; it will suffice to say, that it is done on the Water, so that they are easily discovered; and they are no sooner perceived, than two or three People throw themselves presently into a *Canoe*, make towards them, and come at them with Ease. They slip a Noose around their Neck, or one of their Feet;

or, having no Line, they lay hold of them with their Hand, by the Neck, where it is uncovered by the Shell; sometimes they take both of them together, but most commonly the Female escapes, and the Males at that Time are very lean and hard Meat, but the Females very good.

The Spear for the *Tortoise* is much of the same Sort as that for the *Sea-Cow*, only instead of the barbed Iron, a Piece of square Iron of about half a Finger's Length, and very sharp, is fastened to the Top of the Spear, to which is tied a Line; the Spear being thrown at the Back of the *Tortoise*, the Iron Head is struck half Way into the Shell, which being of a hard bony Substance, it sticks as firm as if fixed in a solid Oak. The *Tortoise* perceiving himself struck, makes the same Struggle to get loose as the *Sea-Cow*, and the Spear-man uses the same Diligence to take him. Some say that the Force abates proportionably to the Blood that is lost; but they are ignorant that the *Tortoise* does not lose a Drop of Blood at the Place where it is wounded, 'till the Iron is taken out.

The Time of taking the *Tortoise* upon Land is from *April* to *August*; for at that Time the *Tortoise* perceives the Inconvenience of its Bulk by its own Weight and great Quantity of Eggs, which are sometimes above two Thousand, and being forced by a natural Necessity, she quits the Sea, during Night, and comes to find out upon the Shore a proper Place to lay her Burthen in, or at least some Part of it; and having found out one convenient for this Purpose, which is always a Heap of Sand, she contents herself that Night, in only taking a View of the Place, and retires gently into the Sea again, leaving the Business to be done the Night following, or very speedily; all the Day she feeds upon the Plants growing on the Rocks in the Sea, without being far distant from the Place where she is to lay her Burthen.

The Sun being upon the Declension, they may be seen drawing near to Land, and watching here and there, as if they mistrusted an Ambuscade: And as their Sight is very piercing, if they perceive any Body on the Shore, they will seek out for another Place wherein they have more Confidence; but if they see no Body, they come ashore when it is dark. After having observed all Sides with great Diligence, they begin to work and dig in the Sand with their fore Feet, making a round Hole of a Foot broad, and a Foot and a half deep; which being made, they lay therein two or three Hundred Eggs, as big and round as a Tennis-Ball. The Egg-Shells are soft as wetted Parchment; the White will not boil hard at all, though the Yellow hardens easily. The *Tortoise* remains above an Hour in laying her Eggs; and during that Time a

Coach



Coach might drive over her Body, and she not stir from the Place. Having discharged her Burthen without Interruption, she covers the Hole so dexterously, and throws the Sand about every where so naturally again, that it is extremely difficult to find the Eggs: That being done, she leaves them, and returns to the Sea. The Eggs are hatched in the Sand in about forty Days Time; at the End of which the little *Tortoises*, being as big as young Quails, make strait to the Sea, without being shewn the Way. Those that are taken by the Way, they fry whole, and so they are delicious Meat.

[The Kinds of *Tortoise* of which any Part is used in Medicine, are the Land *Tortoise*. *Testudo terrestris vulgaris* Raii Synops. An. 243. *Testudo terrestris* Jonsf. de Quad. 144. Aldrov. de Quad. Ovip. 705. The Blood of this kind is esteemed good in Hætics and Epilepsies.

2. The *Turtle*, or *Sea Tortoise*, *Testudo marina vulgaris* Raii Syn. Anim. 254. *Testudo marina* Ald. de Quad. Ov. 712. Jonsf. de Quad. 147. The Gall of this Species is esteemed good in Distemperatures of the Eyes, and the dried *Penis* in the Stone.

And, 3. The Fresh-water *Tortoise*. *Testudo aquarum dulcium et lutaria*. Raii Syn. An. 254. *Testudo aquæ dulcis et lutaria*. Aldrov. de Quad. Ov. 710. Jonsf. de Quad. 146. The Blood and Gall of this are said to possess the Virtues of the former, but none of them are much used with us.]

37. Of the Sea-Dog.

Pomet. **T**HE *Sea-Dog* is a pretty large Fish, that is found in several Parts, but especially about *Spain*, and at *Bayonne*. Of all the Parts of this Fish, we deal in none but the Skin, which we sell, because of the great Service it is of to the Workers in Wood, as Turners, &c. being very proper to polish withal. The true *Dog-Skins*, to be fine, ought to be large and broad; of a rough Grain, not too large nor too small, and supplied with Ears and Fins. The Brain of this Fish dried is very aperitive and good in the Gravel, and for Women at the Time of their Delivery; the Dose is from a Scruple to a Drachm in White Wine.

We have besides, from the *Lower Normandy*, the Skin of a Fish that is very like the *Sea-Dog*, and which they call *Douceite*, or *Roufette*, the *Spotted-Fish*, which some Workmen use instead of the *Dog-Skin*, tho' there is a good deal of Difference, because the *Dog-Skin* is very rough, and the *Roufette* very little so; and besides, the *Dog-Skin* is always brown, and the *Roufettes* are of

different Colours, and constantly spotted on the Back with small Stars; they are also much less, which is the Reason why these Skins are very little used at *Paris*, and indeed scarce any where but in *Auvergne*. Those two Kinds of Skins are also serviceable to other Tradesmen, as Sheath and Case-Makers. We sell likewise another Fish-Skin, which has no other Use in *France*, *England*, and other Parts, than to make Knife Handles of.

Mustelus, or *Galeus laevis*, is a Kind of *Sea-Dog*, which the *Italians* call *Lemery*. *Pesce Columbe*; it is a Fish that weighs above twenty Pounds; it is covered with a Skin that has no Scales, that is soft to the Touch, and of a whitish Colour; it has no Teeth, but the Jaws are rough, and it feeds upon Fish. The Fat is resolute and emollient.

There is another kind of *Dog-Fish*, which is called *Galeus Asterius*, sive *Mustelus Stellaris*, or the *Star Dog-Fish*, that is like the former, only for the Spots upon it that are in the Form of Stars. The Virtues and Uses of it are the same with the other. This Fish is called *Mustelus*, as if you should say, *Mus stellatus*, because this Fish, in its Colour, somewhat resembles that of a Mouse or Rat, and every one of the Species are spangled with Stars.

[The *Sea-Dog*, or *Hound-Fish*, is the *Canis marinus* aut *Galeus*. Schonef. Isth. 29. *Galeus acanthias* sive *Spinax*. Raii Isthogr. 56. Aldrov. de Pisc. 399. The other kind, or *Starry Dog-Fish*, is the *Catulus major vulgaris*. Raii Isth. 62. *Canicula Aristotelis Rondeletio* Aldr. L. 3. cap. 34.

Their Skins are used by Artificers in different Kinds of Work, but I know of no Use that was ever made of either of them in Medicine.]

38. Of the Tunny-Fish.

THE *Tunny*, which the *Latins* call *Pomet*. *Thunnus*, is a pretty large, heavy, big-bellied Fish, which is plentiful in the *Mediterranean*, especially about *Provence*, and at *Nice*, from whence comes what we sell. There are likewise a great many of them upon the Coast of *Spain*. The Time of fishing for the *Tunny* is in *September* and *October*; and there are so many things peculiar therein, that it is by the Fishers generally shewn to Strangers. These two Months are the Time when the *Tunny* runs from the grand Ocean into the *Mediterranean*, towards the *Levant*, as the *Anchovies* do. When the Month of *September* comes, they cast into the Sea large Nets made of Rush Cords, which they call *Madragues*, which are divided as it were into several Partitions, of which the first is larger than

the others; so that the *Tunnies* entering the larger first, do not return till the Net is full, which it is in a small Time, where the Fishery is good, as well from the Plenty of the Fish, as because when one *Tunny* is gone in, the rest follow in a Flock like Sheep. The Net being taken out of the Sea, the Fish die, not being able to live out of the Water; then they hang them up in the Air, open them, take out their Entrails, and take off the Head; and having cut them in Pieces, broil them on large Gridirons, and fry them in Oil Olive; and after having seasoned them with Salt, Pepper, and Cloves, and some Bay Leaves, they put them into little Barrels, thus dressed, and ready to eat with fresh Oil Olive, and a little Vinegar, to transport into several Parts.

We have two sorts brought to *Paris*, which have no other Difference but that some have the Back Bone taken out, and for that Reason are called *boned Tunny*, and are usually put up in little white Wood Barrels, broad at the Bottom, and narrow at Top; that which has the Bones left in it is in little round Barrels. Chuse both sorts new, firm, well done in good Oil, and the Flesh white like Veal. Its Use is very common in *Europe* and several other Parts of the World; as well because it is always ready to eat, as because it is of an excellent Taste, like Veal. They commonly catch with the *Tunny* another Fish, which the *Provincials* call *Imperadro*, or *Emperor*, and Sea Hogs are also seen there; they are always two and two together; but as they are accustomed to leap out of the Water, they get out of the Nets and suffer not themselves to be taken; it is wonderful to see how they leap both together in one Moment, and fall again into the Sea at once, as if they were tied together.

Thunnus, vel *Thynnus*, or the *Tunny*, *Lemery*. is a large, heavy, big-bellied Fish, which is found plentifully in the *Mediterranean Sea*, in *Provence*, *Italy*, and *Spain*. It is covered with large, smooth, straight Scales, and eats Sea Wrack, and other sort of maritime Food. The Flesh is firm, very good to eat, being of a Veal Taste, but is salted to prepare and keep it for Transportation; when it is called *Tunny*. It is very nourishing, and of good Juice, and yields a great deal of volatile Salt. It is reckoned proper to resist Poison, against the Bite of a Viper, &c. being eat, and applied outwardly. This Fish is called *Thunnus*, from the *Greek Word* *Σῆν*, to be carried with Impetuosity, because this Fish moves so swiftly.

[The *Tunny*, or *Spanish Mackerel*, is the *Thynnus seu Thunnus Raii* *Icthiogr.* 167. *Thunnus Aldr. de Pisc.* 112. *Orcynus Rond. de Pisc.* 1. 249. It is a good Food, and is much commended against

venomous Bites, but I am afraid is but a feeble Remedy in Cases of such Consequence.]

39. Of Anchovies.

BESIDES the *Tunny*, we sell *Anchovies*, *Pomet.* that come from the same Parts as the *Tunny*; and we have considerable Trade with them; we chuse the least and newest, white without, and red within, that are firm, and have round Backs, because they pretend that the large and flat ones are Pilchers. When the Barrels are opened, the Pickle ought to be well tasted, and of a good Smell.

Anchovies are taken in several Parts, as in the River of *Genoa*, in *Catalmia*, at *Nice*, *Antibes*, *St. Tropez*, and other Places in *Provence*. They are taken most commonly in the Night, and always in *May*, *June*, and *July*, which are the three Months in the Year that they come from the grand Ocean into the *Mediterranean* to go to the *Levant*. When they fish for the *Anchovies*, and would take a Quantity, they light a Fire upon an Iron Grate at the Poop of the Ship, to the end that the little Fish following the Light, may be the easier taken; but that which is very remarkable in this Fishing, is, that the *Anchovies* that are taken by means of the Fire, are not so good, or so firm, nor will they keep so well, as those which are taken without it. The Fishery being done, they tear from the Head the Gills, and other superfluous Garbage; and this is the Difference betwixt them and the Pilchers, where they are left in; and not, as *Mr. Furetiere* says, because of the Gall, which he, in his Book, takes notice of to be in their Heads. As to the manner of ordering them, they do nothing but range them in little Barrels of different Weight and Sizes, not weighing above five or six and twenty Pounds, in which they put a due Quantity of Salt with the *Anchovies*. We sometimes, but very rarely, have dried Pilchers, prepared the same Way as red *Herrings*; but the little Consumption there is of them gives no Encouragement to the Dealers to make any Demands for them. Being at *Royan*, a little Town of *Xaintogne*, where there are a great many Pilchers, several Fishermen assured me, that these Fish never swarm but in Shoals, and that under the Conduct of a King, or Captain, like the Bees.

Apua, sive *Aphyra*, or the *Anchovie*, is a little Sea Fish, as thick and long as one's *Lemery*. Finger, having a thick Head. The Eyes are broad and black; the Body of a silver white, and reddish within, and the Back round. They do not swim but in Companies, and cling fast

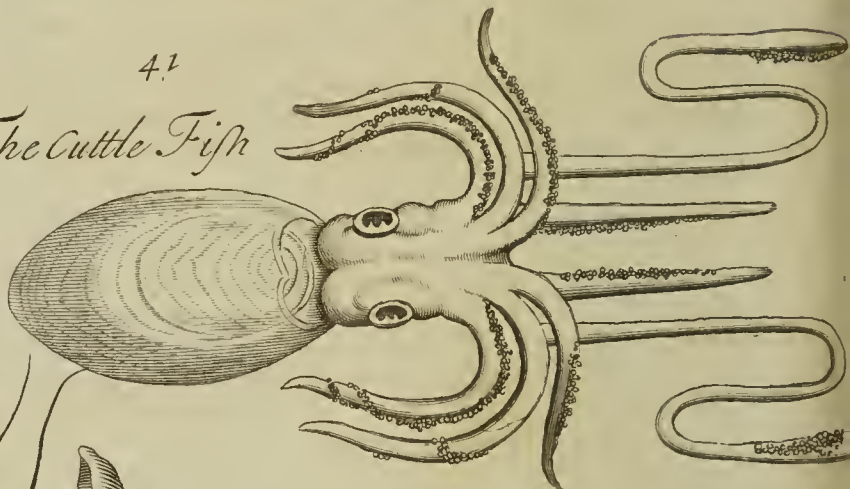


40



41

The Cuttle Fish



The Hermit Fish



42

The Crevise



43

Homars



fast one to the other. These Fisheries are made in several Parts; and when the Fish are taken, they gut them, and take out of the Head what is apt to putrify, then salt them up in Barrels. The little *Anchovies* are valued more than the large ones. They contain in them a great deal of Salt and Oil. They are aperitive, and proper to raise the Appetite; but they serve more for Food than Physick. The *Sardin* is a kind of *Apua*, that is something larger and flatter than the *Anchovy*, but not so well tasted. The *Melette*, or *Sprat*, is a little Fish they eat in *Languedoc*, and which partakes something of the Nature of the *Apua*, which is the Name given in general to these little Fishes, and in particular to the *Anchovy*.

[The *Anchovy* is the *Engrascolus* Ald. de Pisc. 214. Rond. de Pisc. I. 211. Raii Ich. 225. *Halecula* Bellon. De aquat. 169. *Engrascolus* quos alii *Engraulis*, alii *Lycostomos* appellant, Rondel. Gefn. de Aq. 68.

Besides the Use in Food, it is sometimes laid to the Feet in Fevers; but whatever good arises from it, is more to be imputed to the Salt than the Fish, for the Heat of the Part will put the saline Particles in Motion, which, by vellicating the sensible Fibres, may very naturally occasion a more than ordinary Derivation of the Fluids that Way.]

40. Of the Sea-Hog.

Pomet. THE *Sea-Hog* is a large Fish, very well known, the Use of which is very considerable, because it is so excellent Food, that some have ranked this among the royal Fish. Of all the Parts of this, we sell none but the Oil aromatized, or plain, which is nothing but the Fat melted, and by the Addition of some Aromatics, altered from its stinking Smell, and made pleasant. They assign to the Fat and Oil of the *Sea Hog*, the Property of curing cold Humours. Some Apothecaries, by the Retort, draw from this Fish several Preparations, to which they attribute different Virtues.

Porcus marinus, or the *Sea-Hog*, is a *Lemery.* large nimble Sea Fish, that is almost always leaping out of the Water, and swims with a vast Swiftnefs. They commonly call it *Simon*, quasi *simum rostrum habens*, as having a flat Nose or Snout. The Tongue is short, broad, and fleshy; the Teeth little and sharp, ranged like the Teeth of a Comb; the Eyes are large, but so covered with the Skin, that they appear only like the Apple of the Eye, yet the Sight is very fine; the Voice is like that of a Person crying; the Back is hollowed, and bent outwardly. It swims by means of two Wings, or strong able

Fins, which are set on at the Place of the Shoulders. It comes to its Growth in ten Years, and will live to thirty. *Pliny* relates several Stories, true and false, on this Subject. He will leap on board a Ship, usually attended with a Companion. These two Fish will make their Leaps so regularly, that they seem to be joined together. There are many of them taken in fishing for the *Tunny*. They are very good to eat, and yield abundance of Oil and volatile Salt. The Stomach, dried and powdered, is proper for Diseases of the Spleen, and the Liver for intermitting Fevers. The *Sea-Hogs* are made almost like the Dolphins, but they are not so little. The Fat of both is used to the same Purposes.

[This is the *Phocæna Rondeletii* Gefn. 838. *Phocæna seu Turic*, Bellon. It is a large Fish of the cetaceous kind, common in many Seas, but of no Use in Medicine.]

41. Of the Bone of the Cuttle-Fish.

THAT which we sell, and call the *Pomet.* Bone of the *Cuttle-Fish*, and the *Latins*, *Os Sepiæ*, is the Back of a Fish very common in the Ocean, and also in the *Mediterranean*. They are a very ugly Fish, and of a surprising Nature. They eat them in several Towns in *France*; as *Lyons*, *Bourdeaux*, *Rochel*, *Nantz*, &c. The Bone of this Fish is of different Sizes, though the largest never exceeds half a Foot. The Bones are white, and hard on one Side, and soft on the other; for which Reason the Goldsmiths use them for casting. Some use the *Cuttle-Bone* to clean the Teeth with; but the main Use is for the Goldsmiths, and for those who cast *Venetian Lac*.

This Bone consists of a hard brown Shell on the Outside, with a thick, white, spongy, dry Pulp or Substance underneath it, which being rubbed between your Finger, will become a pure white, fine, subtil Powder, that being drunk in Water, helps the Asthma, and is good against Diseases of the Breast and Kidneys, expelling the Stone and Gravel, and curing a *Gonorrhœa*, taken for a considerable Time together. Outwardly applied, it helps Spots, Clouds, Films, Pearls, and other Impediments of Sights, and likewise dries up Rheums, and other watry Humours.

Sepia, the *Cuttle-Fish*, is a deformed *Lemery.* Sea Fish, resembling much a *Polypus*. The Covering of the Back is a Sort of Shell, Scale, or Bone, as broad as one's Hand, an Inch thick in the Middle, but thinner on the Sides, light, hard without, and spongy within, very white, and something of a saltish Taste. They call it *Os Sepiæ*, or *Cuttle-Bone*. The Goldsmiths

smiths use it for Moulds to cast Forks and Spoons in. This Fish carries under its Throat a Bladder, or Receptacle, full of an Humour that is blacker than Ink, which it discharges into the Sea, when pursued, to intercept the Sight of the Fishermen. It has two kinds of Arms, or Trunks, fixed to the Head, which serve it for swimming, and to take what it can catch. Besides these, it has six Feet which have Teeth on the upper Part of them, and two much larger underneath. It lives on small Fish, is good Meat, and brought to the Table in several Parts of *France*. As to its medicinal Use, it is deterfive, aperitive, desiccative, proper to take away Sports on the Face and Skin, to clean Teeth, provoke Urine, and bring away Stone and Gravel. Dose from half a Scruple to half a Drachm. The Eggs or Spawn of the *Cuttle-Fish* provoke Urine and the Terms.

[The *Cuttle-Fish* is the *Sepia Jons. Exang.* 7. *Rondelet.* 1. 498. *Loligo Sepia Merr. Pin.* 191.

The principal Use now made of the Bone is in Powders for cleaning the Teeth, tho' it is a good Diuretick and Detergent.

The black Liquor it has in a Bag in its Neck, is said to be a strong Purge, but I believe few have ever tried it.]

42. Of the Hermit-Fish, or Soldier.

Pomet. **T**HE *Hermit-Fish*, says *Father du Tertre*, is a kind of small Crab, of three or four Inches long, or more; one half of the Body of which is like a *Sea Locust*, or *Grasshopper*, but clothed with a Shell that is a little harder. It has four Feet, which are like those of a Crab, two Biters, one of which is not much bigger than one of the four Feet, and the other much broader than one's Thumb, that strangely shuts the Mouth of the Shell wherein it lodges. All the rest of the Body is a sort of Pudding, in a pretty rough thick Skin, as thick as one's Finger, and half the Length, or more. At the End is a little Tail, made up of three small Nails or Shells, like the Tail of a *Sea-Grasshopper*. All that Part is full of a Substance, like that in the Shell of a Crab, but red; which being exposed to the Fire, or set in the Sun, melts, and runs into Oil, which is a Balsam for fresh Wounds, which I have made Trials of on several Persons with good Success.

They descend once every Year to the Sea Coast; whether it is to wash, and to cast their Eggs, as the Crabs do, I know not: But this I know, that they go to change their Shells, which every one endeavours to find out according to his Size; and finding out what

may fit them, they run themselves backwards therein, and so cloath themselves a-new; and being armed like Soldiers with these foreign Shells, they march to the Mountains, and take up their Quarters among the Rocks and hollow Trees, living upon rotten Leaves and Fruit; among other things they sometimes feed on the *Manchineal Apple*, which so alters them, that instead of a wholesome Food, they become almost a Poison, encreasing in Bulk; and the Shell becoming too straight for them, by reason of their Growth, they are obliged to go down to the Sea-Coast to change their Houses. The Curious, who have made Observations of what happens during the Exchange, have ingeniously owned to me, they took a great deal of Satisfaction in the Sight; for they stop at every Shell they meet with, consider it diligently, and having met with one they believe for their Turn, they immediately quit the old one, and run themselves so swiftly backwards into the other, that one would think they were either afraid of the Injury of the cold Air, or ashamed to be seen naked.

Aristotle, who said that these Animals never fight, but for their Victuals, or when they couple, might have added, that they will fight for their Lodging; for if two of them meet at the same time stripped, to enter into one and the same Shell, they will bite each other, and battle it, till such time as the Weaker yields, and quits the Shell to the Conqueror, who having clothed himself with it, takes three or four Turns upon the Shore, and if he finds it does not fit him, he quits it again, and has immediate Recourse to his old one, and then seeks out for another; and thus they will change five or six times, till they meet with one for their Purpose. They carry in their Shells about half a Spoonful of clear Water, which is a sovereign Remedy against the Pustles and Blisters that the Droppings of the *Manchineal Tree* raise upon the Skin.

Cancellus is a sort of very small Craw- *Lemery.* fish, called the *Hermit*, or *Bernard the Hermit*, because it retires from the others, and enters into the first Shell it meets which. The Figure of his Body is longish, but in Size of the Bulk of a Spider, only that it is a little larger. It carries upon its Head two little, slender, reddish Horns; the Eyes are raised, the Mouth is set with fine Hairs, that may be called a Beard. The two upper Legs are bent up again, and serve instead of Hands to reach to the Mouth, where it has Teeth. They are found near the Rocks, and are good Meat, several eating them after they are washed and boiled. They afford a great deal of volatile Salt, and are proper for Stone and Gravel, being aperitive.

In several of the *American Isles* they meet with a kind of *Cancellus*, or *Craw-fish*, that is much bigger than that I have been speaking of, and that is three or four Inches long, and called the *Soldier*, because he is clothed and armed with a foreign Shell. Those who would know further, may be satisfied from the Reverend Father *du Tertre*, who has writ concerning this Animal, [as *Pomet* has already taken Notice of.] The Inhabitants of the Isles where this Fish is taken, make an Oil of them, by hanging them in the Sun, so that the Substance that melts from them makes an Oil of a Consistence as thick as Butter, and of a very foetid Smell; the Virtues of which are wonderful in rheumatick Pains, to which the Inhabitants of the Country are very subject. They sell this Oil very dear, because it is very scarce in *France*.

[The *Hermit-Fish*, or Foreign Heir, as he is called by some, is the *Cancellus Aldrov. de Exang. 218. Gesn. de Aq. 161. Cancellus quibusdam Bernhardus Eremita dictus Charlt. Ex. 58. Cancer in Testis degens. Merr. Pin. 192.*

The Ashes of this Fish are said to be a powerful Diuretick; the Oil which we have from *America* has been much used in Rheumatisms, but is almost neglected at present.]

43. Of the Sea-Crab and Craw-Fish.

Pomet. THERE are two Sorts of *Sea Crabs*, says Father *du Tertre*, which are commonly called *Homars*, which differ only in this, that the one Kind has two large Pinchers longer and broader than ones Hand, and very strong, and the others have none, but have two large Beards hairy like the Feet of a Crab, and as long as ones Arm; these grow to a vast Size, so that some are three Feet long. The Flesh is white and more relishing than the common *Crabs*, but it is harder, and not so easily digested. It is eat with Lemon Juice, Vinegar, and Pepper. They find them in the Night with Lights on the Sands, or stony Places, from whence the Tide is retired.

There are no Part of the *Sea-Crab* used in Medicine, but the black Tips of the Claws, called *Chelæ Cancrorum*, which are prepared either by Levigation or Calcination. The first is by beating them to a fine Powder, and grinding on a Marble with Rose-Water, or the like. The next Way is putting them in a Crucible, and burning them till they are white, and then reducing them into a fine Powder, as before. These Preparations are *Alcalies* in their Nature, and such as Physicians call a fixed *Alkali*. They cure Heart-Burnings, take away Sourness from the Stomach, absorb Acidities, and ease Pains in the Bowels, pro-

ceeding from sharp Humours. They are sometimes given with good Success in the Whites in Women and the *Gonorrhœa* in both Sexes. They are commended to cool, dry, cleanse, and discuss, and are good against Cholicks, salt Humours, &c.

As to the *Craw-Fish*, we sell nothing but certain little white Stones, made in Form of Eyes, from whence they take their Name, tho' very improperly, since they are nothing but little Stones which are found in the Head of the large *Craw-fishes*. These Stones, which are called *Crabs Eyes*, or *Oculi Cancrorum*, are never found but in *May* and *June*, which are at the Times that the *Craw-fish* leave their Shells. The *Craw-fish* or *Crevise Stones*, which we now sell at *Paris*, come from *Holland*: And, if we can believe a Physician of the *Poland* Envoy, who was a very honest able Man, and remained a long Time in *Holland*, he assured me, that what we sell now under the Denomination of *Crabs Eyes*, was nothing but a white Earth washed, and made into little Pastiles, and moulded with little Instruments made for that Purpose, with Holes of proper Sizes, to form it, and afterwards baked to a Dryness and sent over to us. To prove this, he assured me he saw two Persons at *Amsterdam*, who did nothing else but counterfeit these little Stones; so that now it is no longer doubted but the greatest Part of the *Crabs Eyes* made use of in the Shops is nothing else but an artificial Paste reduced to Powder. What I have to add to this, is, that there may indeed be Counterfeits of *Crabs Eyes*, as there are of almost all other Drugs, but we need not therefore conclude that all we sell are so, neither need the Quantities we receive of these Stones be objected as a Proof they are not genuine, for in the *East-Indies*, where the Fish which produce them breed them more abundantly than here, the Shores of Rivers are in some Places covered with them, and they are gathered up by Handfuls, and it is from thence that the *Dutch* bring the Quantities they have. In *Silesia* they have also great Quantities of them, as also in *Poland*; and they are brought from *Dantzick*, *Hamburg*, *Denmark*, *Norway*, and *Swedenland*, and are found almost every where upon the Shore of the *Baltick* Ocean.

And what strengthens our Opinion of their being genuine, is, that in burning they blacken and calcine as all Bones and Shells do.

There are several Preparations of them, but the levigated Powder is only used, and that chiefly to absorb Acids, open Obstructions, and cleanse the urinary Passages of Gravel; to provoke Urine, and bring away the Stone, and other tartarous Coagulations: The whole Fish is also sometimes calcined in a Crucible and brought to Ashes, which

we sell. If they are rightly prepared, they ought to be yellow; for if they are of a black Colour, they are too much burnt, and good for nothing.

[The Crab, whose Claws is used in Medicine, is the common Sea-Crab the *Cancer Mæas Rond.* 1. 560. *Canceri Marini maximi apicibus Chelarum nigricantibus, Ind. Med.* 25. *Pagurus, Bellon. De Aquat.* 368. *Cancer Schon. Ich.* 30. What we call Crabs Eyes are often adulterated, but the genuine are Stones formed in two Bags, one on each Side, of the Stomach of Crabs, Cray-fish, Lobsters, &c. and found in great Plenty on the Coasts of the Baltick. They are found in the Bodies of these Animals, only at certain Times of the Year, for in June and July, when they cast their Shells, there are none to be found in them, but a new Stomach being formed at that Time, as well as a new Shell, a milky Juice soon fills the Bags, out of which the Stones are formed.]

44. Of the Boutargo and Caviere.

Pomet. **B**outargo, or Potargo, is the Spawn of a Fish, which the People of Provence call the Mullet, very frequent in the Mediterranean. The best is that which comes from Tunis in Barbary. It is likewise made at Martegue, eight Leagues from Marseilles. The reddest is most valued. They eat it on Fast-Days with Oil Olive and Lemon.

There is also a Stone found in the Head of this Fish, which is aperitive, and good for the Stone, the Dose is from half a Scruple to two Scruples.

The Caviere, or Cavial, which we have, comes from Italy, is made in several Parts of the Levant from the Spawn of a Fish, which some have assured me was the Sturgeon, which I shall not assert to be so, not knowing it positively. I shall only say this, that they eat a great deal of it in Italy, and but little in France, it not being so well known, no more than the Boutargo, especially at Paris.

Mugil, Cephalus, or the Mullet, *Lemery.* whereof Boutargo is made, is a Sea and River Fish, which has a great Head, from whence it is called *Cephalus*, which signifies a Head; the Muzzle is thick and short, the Body oblong, covered with Scales. They find a Stone in its Head, which is called *Echinus*, or *Sphondilus*, because it is set with Prickles. This Fish is common in the Mediterranean; it swims with an extraordinary Swiftnefs, and gives some Disturbance to the Fishermen. It is good Meat, and yields Abundance of Oil and Phlegm, with some little volatile and fixed Salt. The Ventricle being dried and reduced to Powder, is proper to stop Vomiting, and strengthen the Stomach: This

Stone found in the Head is very aperitive, and proper to dissolve the Stone in the Kidneys and Bladder. The Dose is from half a Scruple to two Scruples. The Spawn of the Fish serves to make Boutargo, which is usually eat on Fast-Days.

[The Mullet, the Spawn of which makes Boutargo, is the *Mugil. Raii Ich.* 214. *Cephalus Rond. de Pisc.* 1. 260.

Caviere is the Spawn of the Sturgeon, *Sturio Ald. de Pisc.* 517. *Sturio sive Silurus. Salv. de Aqu.* 113. prepared with Salt, Vinegar, &c. and is more properly a Food than a Medicine.]

45. Of the Shark.

THIS Fish is called by the Spaniards *Pomet.* *Phyburon*, by the Dutch Hays, and by the French, *Requiem*, because it devours Men, and so is the Occasion that Dirges are sung over them: It is in Shape very like the Sea-Dog, or Hound-fish described before. He is one of the most gluttonous Animals in the World; nothing comes amiss to him; tho' it be a Log of Wood he will swallow it, provided it be but greasy, for he swallows without chewing. He is furious and bold, and will throw himself to the Shore, and remain almost on the dry Land, that he may have the Opportunity of catching the Passengers. Sometimes he will bite at the very Oars with his sharp Teeth, for Rage and Madness that he cannot get at the Men which are in the Boat. There is found in his Head two or three Spoonfuls of Brain that is as white as Snow, which being dried, reduced to Powder, and taken in white Wine, is excellent for the Gravel. The Reverend Father *du Tertre* has made a long Discourse of this Animal, to which the Reader may have Recourse. Some have given the Name of *Tiberon* to this Animal, and others that of the Fish with two hundred Teeth; and he is so furious, that with one Bite he will snap off the Thigh of a Man.

Besides these Animals, and Parts of them whereof I have treated, we sell, tho' very rarely, the Bone of the Shark's Head, as also those of the Crocodile, Carp, Perch, &c. with the Jaws of the Pike; and, in France, the Druggists are permitted to sell all Sorts of Salt-Fish, either Wholesale or Retail.

Carcharias, Canis Marinus, or the Sea-Dog, *Lemery.* is an American Fish, that grows to a large Size, so as to be two Ton Weight. It is long and thick, covered with a rough Skin. The Head is very great, and like a Dog's; the Mouth long and broad, furnished with Abundance of triangular Teeth, that are hard and sharp. The Eyes are large and round, the Body cartilaginous, the Tail about

about a Foot and a half long, and forked; the Fins are great, it swims in the deep Sea, but sometimes enters into the Mouths of the Rivers to pursue its Prey; it lives on Fish and Flesh, but is very eager after that of Man. *Johnston* relates, that he found in one of these *Sea-Dogs* a whole Man. They are of several Sizes. Their Flesh is eat, but it is not good. The Skin is of great Use to several Artists. The Head contains in it two or three Ounces of Brain, that is very white. The Teeth are used to rub Children's Gums with, to make their Teeth cut.

[The Shark is the *Canis Carcharias*. *Ald. De Pisc.* 383. *Canis Carcharis seu Lamia Raii Isth.* 47. *Canis Aristoteli five Carcharis Jonsf. de Pisc.* 13. The petrified Teeth of this Fish are what are called *Glossopetræ*, they are hung by the good Women about Childrens Necks, in Imagination that they assist them in the Time of cutting their Teeth. They are also said to be cordial, alexipharmick, and sudorifick taken inwardly, but I believe few have tried them.]

46. Of Pearl.

Pomet. **T**HE Pearls are little round Bodies, or rough and roundish, that are found both in the Eastern and Western Seas. There are several sorts of them, which are more or less valued, according as they are large, round, and of a fine Water, and according the Place from whence they are taken, as the following Account from Mr. *Tavernier*, who in his Travels has made a curious Enquiry after them, will shew. These Pearls are found, says he, both in the East and Western Oceans. And though I have never been in *America*, yet as well for the Reader's Satisfaction, as that nothing may be omitted, I shall relate all the Parts where the Pearl Fishings are, beginning with those of the East. First of all, there is Pearl Fishing about the Isle of *Babren* in the Gulph of *Persia*. This belongs to the King of *Persia*, and therein is a good Fortrefs that entertains a Garrison of three Hundred Men. The Water which they drink in this Island, and that of the Coast of *Persia*, is like salt Water, and of an ill Taste, and what none but those of the Country are able to drink. As for Strangers, if they will have fresh Water, they must pay for it; being only to be had a League or two off, by putting to Sea five or six Persons in a little Vessel, and drawing Water with a Bottle from the Bottom of the Sea, where for about two or three Foot at the Bottom of the Water is sweet, and pleasant to drink. When they that dive to the Bottom of the Sea to draw up this Water have filled the Vessel,

and stopped it close, they give a Pull to a small Cord, which is tied to one of those in the Boat, which is the Signal to his Comrades to pull him up.

During the Time that the *Portuguese* were possessed of *Ormus* and *Mascate*, every Vessel that went out to fish, was obliged to take from them a Passiport, that cost fifteen *Abassis*, and they kept always several Brigantines to sink such as refused. But since that the *Arabs* have retaken *Mascate*, and that the *Portuguese* have no Forces upon the Gulph, every Man that fishes, pays only to the King of *Persia* five *Abassis*, whether he has Success in his Fishery, or catches nothing at all. The Merchant also gives some small Matter to the King out of every thousand Oysters.

The second Fishery of Pearls is opposite to *Babren*, on the Coast of *Arabia Fælix*, near the City of *Catifa*, which belongs to a Prince of the *Arabs*, with all the Country thereabouts. All the Pearls taken in those Parts are mostly sold in the *Indies*; because the *Indians* are not so difficult to be pleased as we, and will take the rough as well as the round. They likewise carry some to *Balsara*. Those that go into *Persia* and *Muscovy* are sold at *Bander-Congo*, two Days Journey from *Ormus*. In all the Places I have named, and other Places of *Asia*, they admire the Pearl that is upon the yellow Water, more than the white, because they say the Pearl, with that Water, retains its Liveliness, and will not fade; but that the white will not last above thirty Years without losing its lively Colour; and not only the Heat of the Country, but the Sweat of the Person that wears them, will discolour them with an ugly yellow.

Before I leave the Gulph of *Ormus*, I must beg leave to give an Account of that admirable Pearl, which the Prince of the *Arabs* had, who took *Mascate* from the *Portuguese*, who took then the Name of *Imneet*, Prince of *Mascate*, but was called before that, *Accph Aen Ali*, Prince of *Nor-envæ*. It is no other than a petty Province, but the best of all the *Arabia Fælix*. There grows every thing that is necessary for human Life, but particularly the finest Fruits, and especially Grapes, whereof they may make excellent Wine. This Prince had the finest Pearl that was in the World; not for its Size, for it weighed not above twelve Carats, or its perfect Roundness; but because it was so clear and transparent, that you might almost see clearly through it. As the Gulph over-against *Ormus* was not above twelve Leagues over from the *Happy Arabia* to the Coast of *Persia*, and the *Arabs* were at Peace with the *Persians*, the Prince of *Mascate* came to pay a Visit to the *Kan* of *Ormus*, who treated him very magnificently, and invited to his Entertainment, the *English* and
Dutch.

Dutch, and several other *Europeans*, of which Number I was one. When Dinner was over, the Prince took this *Pearl* from a little Purse that hung about his Neck, and shewed it to the *Kan* and all the Company. The *Kan* would have bought it, for a Present to the King of *Persia*, and offered him to two Thousand Tomens, but it would not do. Since that, I passed the Sea with a *Banian* Merchant, which the Great *Mogul* had sent to that Prince to offer him Forty Thousand Crowns for that *Pearl*, which he would not take. This Story lets us see as to what relates to Jewels; those which are fine are not always brought into *Europe*, but rather carried out of *Europe* in *Asia*; because in all those Parts, they set a great Price upon precious Stones and Pearls that are of an extraordinary Beauty, except in *China* and *Japan*, where they do not mind them at all.

The next Place, in the Eastern Parts where there is a Fishery of *Pearls*, is in the Sea that beats upon a large Town, called *Manar*, in the Isle of *Ceylon*. These are the finest for their Water, and their Roundness, of all the other Fisheries, but there are rarely any found that exceed three or four Carats Weight. There are, moreover, upon the Coast of *Japan*, *Pearls* of a very fine Water, and very large, but uneven or rough; but they never fish for them, because, as I have been saying, the *Japoneze* do not value Jewels. Although the *Pearls* which are found at *Babren* and *Catifa* are a little upon the yellow, they will yield as good a Price as those of *Manar*, as I have observed; and throughout all the East, they allow they are then come to their full Maturity, and will never change Colour.

I come now to the Western Fisheries, which are all in the great *Gulph* of *Mexico*, along the Coast of *New Spain*, and they are five in Number, lying in Order, from the East to the West, as follows. The first is along the Isle of *Cuba*, which is not above three Leagues about, and five, or thereabouts, distant from the *Terra firma*. It is in six Degrees and a half of Northern Latitude, and one Hundred and sixty Leagues from *St. Domingo*, in the Isle called *Hispaniola*. This is a very barren Soil, and wants every Thing, especially Water, which the Inhabitants are obliged to fetch from the *Terra firma*. This Island is famous in the *West-Indies*, because it is the Place where there is the greatest Fishery of *Pearls*, though the largest of them, exceed not five Carats Weight.

The second Fishery is in the Isle of *Margarit*, that is to say, the Isle of *Pearls*, a League from *Cuba*, which it very far surpasses in Bigness. It produces every Thing necessary for Life, only that it wants Water as well as *Cuba*, and they

are forced to bring it from the River *Cumana*, near *New Cadiz*. This Fishery does not yield the most Plenty of all the Five that are in *America*, but is esteemed the Chief, because the *Pearls* which are found here excel the other in Goodness, as well for their Water as their Bigness. One of these last, which I have had in my Possession, being shaped like a Pear, and of a fine Water, weighed fifty five Carats, and I sold it to *Cha Est Kan*, Uncle to the Great *Mogul*. Several Persons are surprized, and wonder why we should carry *Pearls* out of *Europe* into the *East-Indies*, where they have so many: But they should take Notice that in their Fisheries of the East, they do not meet with such large ones as in the West; adding to this, that all the Kings and great Lords of *Asia*, will give a greater Price than those in *Europe*, not only for *Pearls*, but all sorts of Jewels, that have any Thing excellent in them, except *Diamonds*.

The third Fishery is at *Comogota*, pretty near the *Terra firma*. The fourth is at *Rio de la Hacha*, along the same Coast. The fifth and last is at *St. Martha's*, about sixty Leagues from *Rio de la Hacha*. All these three Fisheries produce pretty large *Pearl*, but for the most Part they are ill shaped, or irregular, and of a black or leaden Water. As for the *Scotch Pearl*, and those found in one of the Rivers of *Bavaria*, though there have been Necklaces of them valued at a Thousand Crowns and upwards, yet they are not to be equalized with the oriental or occidental *Pearl*. Of later Years there has been a Fishery discovered in a certain Part of the Coast of *Japan*, and I have seen some of the *Pearl* which the *Dutch* have brought from thence, that have been of a fine Water, and large, but irregular.

Before I finish this Chapter, I will give you a Remark worth Consideration, in Relation to *Pearls*, and the Difference of their Waters; some being very white, some inclining to yellow, and others upon the black, which are, as it were, of a leaden Colour. As to these last, they are met with nowhere but in *America*, and their Colour comes from the Nature of the Soil, which is fuller of Mud than that of the Eastern Parts. In the Return of the Cargo which the *Sieur du Jardin*, the famous Jeweller, had in the *Spanish Gallies*, there were six *Pearls*, perfectly round, but as black as Jet, and which, one with another, weighed twelve Carats each. He gave me these, among other Things, to carry to the *East-Indies*, and see if I could dispose of them; but I brought them back again, and could meet with no Body that would look upon them. As to the *Pearls* which are inclined to yellow, that comes from hence, that the Fishermen selling the Oysters in Heaps, and the Merchant

chant staying sometimes fourteen or fifteen Days before they open, to take out the *Pearl*; some of these Oysters, during this Time, lose their Liquor, which wastes and stinks, and the Pearl becomes yellow from the Infection; which is so true, that in all the Oysters that keep their Liquor, or Water in them, the *Pearls* are always white; but they wait till the Oysters open of themselves; because if they should open them by Force, as we do ours here, they would endanger the damaging and splitting the *Pearl*. The Oysters of the *Streights of Manar*, open naturally five or six Days sooner than those of the *Gulph of Persia*, because the Heat is much greater there, which is in the tenth Degree of Northern Latitude, than in the Isle of *Babren*, which is in the twenty-seventh; and therefore among the *Pearls* that come from *Manar*, there are but few yellow ones. In short, the People of all the Eastern Countries are much of our Minds, in relation to Whiteness; for I have always made it my Observation, that they love the whitest *Pearl*, the whitest Diamonds, the whitest Bread, and the fairest Women.

Margaritæ, Uniones, vel Perlæ, Pearls, Lemery. are little Stones almost round, oval, or shaped like Pears, compact, hard, smooth, white, shining, and of different Sizes, which are formed in certain Oysters, whose Shells are of different Bigness: But there some of them met with that are three or four Times as big as the *Röien Oysters*. They fish for these Pearl Oysters in the Eastern and Western Ocean, as you may see at Length in Mr. *Tavernier's Travels*. The Antients called these Pearls *Uniones*, because they believed there never was but one in an Oyster; but they were deceived, for we sometimes find seven in a Shell. They are bred from a viscous, or saline, glutinous Humour, that is condensed and petrified in several Parts of the Fish. Instead of a particular Part being assign'd for the Generation of *Pearl*, they breed indifferently in all the Parts of the Oyster, but are most commonly found in the largest and best shaped Oysters rather than in others; these Oysters are as good to eat as the common Sort. Sometimes we meet with Pearl in Muscles, and other Shell Fish, as well as in Oysters. All *Pearl* is esteemed cordial, proper against Infection, to recruit and restore lost Spirits; but their chief Virtue is to destroy Acids, as other Alcalies do, and likewise to correct the Acrimony of the Stomach. *Pearl* is likewise good against a canine Appetite, a Flux of the Belly, the Hemorrhage, &c. The Dose from six or ten Grains to a Drachm.

VOL. II.

47. The Manner of the Pearl breeding in the Oyster.

I Know, that on the Authority of several antient Authors, that were not well informed in the Nature of Things, it is commonly believed that *Pearl* is bred from the Dew of Heaven, and that there is never above one in a Shell; but Experience has let us see the contrary: For as to the first, the Oyster never stirs from the Bottom of the Sea, where the Dew can never come; and as to the other, it is certain that there are found from six to seven *Pearls* in a single Oyster; for I have one in my Hands, where there are ten *Pearls*, that were in the Course of Formation. It is true, they are not all of the same Size, for they breed in the Oyster just as Eggs in the Belly of the Hen; for as the largest Egg advances first to be excluded, the least stay behind, till they have acquired their Bigness; so the largest *Pearl* advances first, and the other less, not having attained to their Perfection, remain under the Oyster at the Bottom, till they are grown to the Size that Nature has appointed for them; but we cannot say there is a Pearl in every Oyster, for there are several opened in which there are none at all.

The Pearl-Fishing in the *East-Indies* is twice a Year; the first is in *March* and *April*, and the second in *August* and *September*; and the Sale of them is from *June* to *November*. The People are so poor, and live so miserably along the Coast on the *Persian Gulph*, that they must starve but for this Fishery, for they have neither Bread nor Rice, and eat nothing but Dates and Salt-Fish; and they must go twenty Leagues in the Country before they can meet with a Plant. The more Rain there falls in a Year, the better the Pearl-Fishing is. Many have imagined, that the deeper in Water the Oyster is found, the Pearl therein is the whiter, because the Water is not so hot, and the Sun finds greater Resistance to get to the Bottom; but that is only a groundless Fancy. They fish from four to twelve Fathom deep; and this Fishery is upon the Banks, where there are sometimes Two hundred Barks, or little Vessels, at a Time, in most of which there is not above one Diver, or two at most.

These Boats go off every Day from the Coast before the Sun rises, with a Land-Breeze, which lasts till ten a Clock in the Morning, and in the Afternoon they return with the Sea-Breeze, that constantly, about eleven or twelve at Noon, succeeds the other. The Banks upon which they fish, are five or six Leagues out at Sea, and when they come there, they fish thus for the Oysters:

L

They

They tie a Cord under the Arms of those that dive, of which those that remain in the Boat take hold of the End. They tie to the great Toe a Stone of eighteen or twenty Pounds, of which those that are in the Boat take hold also by a Cord. They have besides a Net made like a Sack, whose Mouth is made round like a Circle, that it may keep open, and this Net is tied like the rest. Then the Diver goes down into the Sea, and as soon as he is at the Bottom, where he is quickly by the Weight of the Stone, he nimbly unties the Stone, which those in the Boat draw up again. As long as the Diver can hold his Breath, he put the Oysters into the Net, and when he finds he can hold no longer, pulls the Cord that is tied under his Arms, which is the Signal that he would come up, and those that are in the Boat draw him up as quick as possible. Those at *Manar* are more expert at fishing, and stay longer in the Water than the Fishermen of *Bahren* and *Catifa*, for they put nothing in their Noses or Ears to keep out the Water, as they do in the *Gulph of Persia*.

After they have drawn up the Diver into the Boat, they take about half a Quarter of an Hour's Time to empty the Net of the Oysters. In the mean while the Diver recovers his Breath, and then returns to the Bottom of the Sea, as before; which he does several Times for ten or twelve Hours together, and then returns to Land. To conclude this Discourse of Pearl, we ought to observe, that throughout *Europe* they sell by the *Carat*, which is four Grains, as well as that of the Diamond Weight; but in *Asia* they use several Weights. In *Persia* they weigh Pearls by the *Abas*, and an *Abas* is an Eighth less than our *Carat*. In the *Indies*, especially in the Great *Mogul's* Countries, and in the Kingdoms of *Golsenda* and *Visapour*, they weigh by the *Ratis*, and that is also an Eighth less than the *Carat*.

Goa was formerly the Place where the great Trade of *Asia* lay for Diamonds, Rubies, Sapphires, Topazes, and other precious Stones. All the Miners and Merchants came here to sell whatever was fine from the Mines, &c. Here also was the great Commerce of Pearls from all Parts of *Asia*, as also of those from *America*. As for *Africa*, this Sort of Traffick is unknown to them, because the Women there are contented with Pieces of Chrystal, or some Grains of false Coral, Glasse Beads, or yellow Amber, to make Necklaces and Bracelets of. As to the Pearl we usually sell, called *Seed Pearl*, which is for medicinal Uses, being proper to reduce into Powder by the Mortar or Muller, it ought to be white, clear, transparent, and true Oriental, rejecting all other Kinds, espe-

cially the *Scotch* or *Brussels Pearl*, being nothing but an artificial or counterfeit Sort. The Use of Pearl is to put in Potions, or other Cordial Compositions. The Ladies of Quality use the fine ground Powder of it, to give a Lustre and Beauty to the Face. They make of it likewise, with Acids, &c. a Magistery and Salt, to which they attribute large Virtues; besides other imaginary Preparations; as the *Arcanum* of Pearl, the Flowers, Spirits, Essences, Tinctures, and the like, to pick Fools Pockets; but the best and only useful Preparation of it, is the Powder well levigated.

[*Pearls* are a morbid Excrecence from the Shells they are found in, of a stony Substance, and consisting of several *Strata*, like the *Bezoar* and other Animal Stones, and have no other Virtues however extolled than those of the Shell they are bred in.

The *Scotch Pearls* are found in the common Oyster, and are often as big as a small Pea, and sometimes, though seldom, larger.

The oriental and occidental Pearls, of which the former are most esteemed, and of those, especially those of *Ormuz*, are found in the *Concha Margaritifera plerisque Berberis antiquis Indis dicta*. *List. Hist.* and in Oysters and Muscles, of many Kinds.]

48. Of Mother of Pearl.

WE bring to *Paris* great greyish Shells *Pomet* that are rough and uneven on the Outside, and of a white, inclining a little to be greenish within, which they call, though improperly, by the Name of *Mother of Pearl*; not because the Pearl is bred in them, as a great many People believe, but because they are on the Inside of the Colour and Water of oriental Pearl, as they are also without, when they are prepared with *Aqua Fortis*. These Shells serve for several Sorts of fine Works: And as they are alkaline and approach to the Virtues of Pearl, a great many People preserve and grind them into Powder, after which they form them into Troches, and sell them for prepared Pearl.

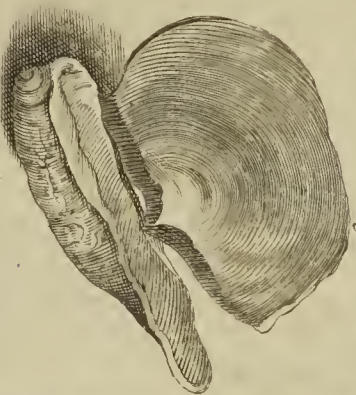
The *Mater Perlarum* or *Nacre de Perles*, in English, *Mother of Pearl*, is a *Lamery*. kind of Oyster, of which there are several Sorts that are within of the Colour and Beauty of the oriental Pearl. I have preserved by me one of these Shells that weighs seventeen Ounces, and is as broad as both my Hands. Chuse the whitest, and of the best Lustre. They make of these Shells Snuff-Boxes, and a great many other fine polished Works, that are neat, smooth, and

True Mother of Pearl.



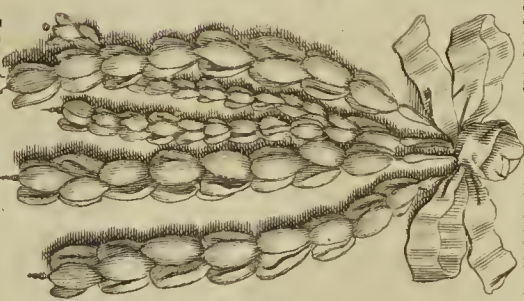
48

False Mother of Pearl.



49

The Shell of the Sea Snail or Tridacna pinnata.



50

The true good shell.



The false.

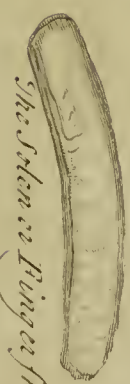


53

Sweet Hoof.



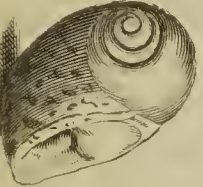
54



The Selen or Ringed Shell.

52

The Neute.



Small Sea snail shells.



Great Sea snail shell.

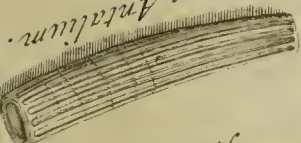


The Spasse.



51

The true Antaliem.





and very agreeable to the Eye. And likewise grind it to Powder on a Porphyry, and it is used by the Women amongst their Pomatums, for a *Fucus* to beautify the Face.

[The *Mother of Pearl* is the *Concha Margaritifera*, *Mont. Ex. 6. Bellon. Aq. 202. Concha Mater Unionum*, *Rond. Aq. 2. 33. Concha Mater Unionum dicta, five Margaritifera*, *Bonan. 93. 11. n. 1.* It is one of the many Shells in which Pearls are found. It is as good an Alkali as the rest of the same Class, and though not often prescribed, is very often used, being generally a Succedaneum for the true Pearl.]

49. Of the Shell of the Sea Snail, called *Concha Venerca*.

Pomet. **W**HAT we call the *Porcelain*, or *Sea Snail Shell*, and the *Latins*, *Concha Venerca*, is the little white Shell that is brought from several Parts of the *East* and *West-Indies*, hung in Strings in the Nature of Beads, and brought to us in Bunches; so that in a Parcel where there are several of these Bunches, there are more than a Thousand of these little Shells. The *Siamois*, *Arovargues*, and the People of *New Spain*, use these little Shells as we do Money here. They are used in Powder with us as Pearl; chuse the least and the whitest. There are several Sorts of them described by *Johnston*, but we have only given the Figure of one, which is the Kind kept by the Druggists. It was once an Opinion, that the fine *China Ware* was made of these Shells, &c. but it is now known to be made of an Earth; though the Manner of Painting it, and other Particulars, are yet a Secret.

Concha Venerca, *Porcelaine*, or *Puce-Lemery*. *lage*, is a little *Sea Snail Shell*, something larger than a Pine Kernel, longish, white, and smooth, which is brought us from the *Indies*, strung several together like Beads. They serve the Natives there for Money. They make a better white than *Pearl*, and are used in Paint for the Face. Besides which, they are alkaline, and a good Sweetner of the Blood, but are not much used in Physick.

[The *Porcelaine*, or *Money Shell*, is the *Concha Venerca*, *Conchula Cytheriaca*, *Mont. Exot. 6. Venerca in Mari Siculo et Tarentino frequens, ubi vulgo vocatur Porcelletta*. *Bonan. 145. n. 251.* It is an Alkali, like the rest of the Testaceous Kind, but never used in Medicine.]

50. Of the Dentalium, or Dog Tooth-shell.

Pomet. **T**HE true *Dog Tooth-shell*, or *Dentalium*, not *Dantalis*, as it is com-

monly called, is a kind of Pipe of about three Inches long, thick at one End, and small at the other, made like a Dog's Tooth, of a greenish shining White, adorned with straight Lines that go from one End to the other. It is hollow, and light, of the Size of a Quill at the thick End, and smaller by Degrees, to the other End.

This true *Tooth-shell* is so rare, that it was never rightly described by any one; and if it were not that Mr. *Tournefort* has given me one, the Figure of which is engraved in Plate 86, I should have been obliged to pass it over in silence, and say, with *Schroder* and others, that it was that small hollow Pipe of several Colours, which is very commonly found on the Sea Side, and sold in the Shops for the true *Dentalium*, and which the Apothecaries improperly use as such in several *Galenical* Compositions. Several likewise use a Bone from the Head of a Sea Fish for the true *Tooth-shell*. As to the Virtues of this, it is an Alkali, to be used as other testaceous Powders.

[The *Tooth-shell* is the *Dentalium*, *Mont. Exot. 6. Dentale lævum, album, altera extremitate rufescens*, *List. Hist. Conch. 4. Sect. 11. n. 2. Tubulus Dentalis lævis*, *Lang. Meth. Test. 5.* It is found in the *British Seas*, and is of an oblong, slender, cylindrical Shape, something crooked, and open at both Ends. It has been made an Ingredient in many Compositions, but is very little used at present.]

51. Of the Antalium, or Entaglia.

Pomet. **T**HE true *Antalium* is as little known as the former, since the Apothecaries constantly, for the true *Antalium*, use a hollow Pipe, of different Colours and Sizes, not exceeding, however, that of a large Quill. These Pipes are found at the Bottom of the Sea, and upon Rocks, sometimes separate, and sometimes several of them together; they serve for several little Sea-Worms to creep into. And several Authors, especially *Rondelet*, an eminent Physician of *Montpelier*, calls these Pipes, *Tubuli Marini*. I shall not stop here to relate the long Discourse of *Renou* in his Book, but affirm, according to Mr. *Tournefort*, who is a Man of the greatest Perspicuity, as well in Plants as Shells, that *Europe* has bred these many Years, that the true *Antalium* is another sort of Pipe, which grows likewise at the Bottom of the Sea. This Pipe is about an Inch and a half long, and the Bigness of a large Quill at the thick End, and that of a little Quill at the other. It is hollow and thick at one End, and slender at the other. As to the Colour it is always white,

white, but differently so, being found of a greenish white, and a more unpolished white, &c. As to the Choice of these two Pipes, there is no other than to take the true; for the Virtue of the *Antallium* is nothing different from that of the *Dentalium*, they being both Alcalies and Driers.

[The *Entaglia* is the *Entallium*, *Charlt. Ex. 63. Tubulus dentalis stratus, Lang. Meth. Test. Tubulus aut Siphunculus maris. Bonan. 91.* It is like the Tooth-shell, but longer and thicker, of a greenish Colour, and striated. It is brought to us from the *East-Indies*, and possesses the Virtues of the former, and other testaceous Substances, but is very little used.]

52. Of the *Umbilicus Marinus*.

Pomet. **W**HAT the *Latins* calls *Umbilicus Marinus*, i. e. *Sea-Navel*, is the Covering of a Sea Snail, that is very common in the *Mediterranean*, which *Rondelet* calls *Cochlea cœlata*. This Lid is tied to one End of the Fish, and when it retires into its Shell it draws after it the Lid or Covering, which shuts the Mouth of the Shell so exactly, that the Sea-Water cannot enter. *Rondelet* informs us, with good Reason, that the true *Umbilicus Marinus* is a Shell very different from this Covering, which he describes in the 38th and 39th Chapters of the same Book; but Custom has decided this Controversy in Favour of his Covering, which must be used when the *Umbilicus Marinus* is prescribed: It is of different Sizes. That which is most frequently seen is not much broader than a Farthing, and of about the Thickness of a Crown-Piece. It has its Denomination from the Similitude it bears to that Part, of which it bears the Name. It is flat on one Side and convex on the other, and of different Colours, the flat Side being sometimes whitish, but commonly of a mottled brown, and the convex Side, white with a Mixture of yellowish or reddish. Some instead of this, tho' it is not very scarce, use the Shell of a Sea-Snail called *Nerita*, of which Mr. *Tournefort* gives the following Account.

The History of the *Nerita* is very confused in both antient and modern Authors. But that which *Rondelet* takes for the *Delian Nerita*, is a kind of Sea-Snail that is found in the *Mediterranean*, and which the Waves cast upon the Sands in the same Places with the *Solen*. These Snails are as big as the Land-Snails, and pretty like them in Shape; but they are much thicker, smoother, and usually redder within: Outwardly they are met with of different Colours. *Rondelet* says, that the Sort he speaks of are marked or spotted with Black, but this Kind is scarce. I have seen some all white,

others that have been of a Rose-Colour, and several other Varieties. Those also which *Bellonius* describes resemble the Figure of those of *Rondeletius*, but he has not mentioned their Colour. He says they are called *Bigomet*, or *Bigorneau*, in *Bretagne*, and *Virlis* at *Paris*. Besides the *Nerita* some Apothecaries use, instead of the *Umbilicus Marinus*, a small Plant, whose Leaves are round and thick, which the Antients called *Cotyledon*, or *Umbilicus Veneris*, Navelwort, because the Leaves pretty much resemble the Shape of the Navel. This Plant is pretty scarce at *Paris*, but very common in *Languedoc*. But the Thing which ought to be used where *Umbilicus Marinus* is ordered is the *Operculum* of the Shell-fish before mentioned.

[The *Umbilicus Marinus* is the *Operculum* of the *Cochlea trichiformis, striata, rugosa, papillosa. Lang. Meth. Test. 51. Cochlea cœlata, Aldr. De Exang. 393. Cochlea cœlata, Antonmasticæ dicta, Bonan. 114.* It is common in the *Mediterranean*. It has the Virtues of the other Testacea, and has been used to be hung about Childrens Necks, and as a Preservative against the Cholick.]

53. Of Sweet-Hoof.

THE *Unguis Odoratus*, or *Sweet-Hoof*, *Pomet.* is likewise the Lid or Cover of a certain Shell-fish called *Conchylium*; this is of different Sizes; but for its Shape it resembles the Claws of some Animals. It is thin, of a brown Colour, easy to burn, and of an unpleasant Smell, like that of Horn, which is quite contrary to its Name; and I cannot understand what Reason the Antients could have to call it *Unguis Odoratus*, as well because it has no Resemblance to Hoofs, if it has any to the Claws or Talons of any Animal, as because the Scent is so far from being agreeable, that it is very stinking. *Dioscorides* calls this Covering *Unguis, sive Onyx*: This Covering, says he, is like to that of the Purple-fish. That which is found in the Lakes of the *East-Indies*, amongst the Spikenard, is of a very pleasant Smell, because the Fish to which it belongs feeds on this Plant. This Author prefers that which comes from the *Red-Sea*, to that which is found on the Coast of *Babylon*, which is blackish, and much less. They burnt in his Time one and the other for the Vapours, because, says he, the Smell comes near to that of *Castor*; which confirms what I have said, as the Smell of *Castor* and the other are both very disagreeable: Wherefore it should no longer be called *Unguis Odoratus*, but only *Blatta Bizantia*, that is, of *Constantinople*. As this is very scarce, they substitute in its Place the *Solen*, both Male and Female, whereof this which follows is the Description.

[The

[The *Constantinople Sweet Shell* is the *Blatta Byzantina Arabum*. Ald. *De Exang.* 346. *Operculum cochlearum marinaram subrotundum vulgare*. Lang. 56. It is of an oblong Figure, a tough Consistence, and disagreeable Smell, and serves as a Cover to a kind of Murex or Purple-fish.

It is the general Opinion, that this and the *Unguis Odoratus* are the same; but whoever will carefully read *Dioscorides*, will find them to be two entirely different Things, and that the true *Unguis Odoratus* was not an *Operculum*, but a Shell-fish, found in the Lakes, made by the Overflowings of the *Ganges* in the *East-Indies*; it was probably of the *Pectunculus* Kind, and named *Unguis* and *Onyx*, from the Resemblance to the Nail of the human Finger. We need not therefore wonder, with our Author, at the Name, as not suiting what is now sold under it, as it certainly was never intended for it.]

54. Of the Solen, or Finger-Shell:

Pomet. THIS is a Shell of two Pieces, that are joined together at one End, from four to five Inches long, and from seven to eight Lines in Breadth, hollow like a Spout, arched above, thin, square at the Ends; and which, when joined together, are like a small Trunk, or one of those Cafes wherein they put a Knife and Spoon for the Table. *Rondelet* calls the Male *Solen*, that whose Shell is bluish, or of a Slate-Colour, and this is agreeable to *Apuleius's* Sentiment; and he calls the Female *Solen*, that which has the white or russet Shell, and which is generally less than the other. These two Species are very common in the *Mediterranean*. I have gathered them upon the Sands in the Isles of *Hieres*, and on the Coast of *Martiques* in *Provence*, and in *Languedoc*, on the Coast of *Perant* and *Cette*. They meet with, besides, a kind of *Solen* on the Coast of *Normandy*, whose Shells are white, inclining to purple; but they are thicker than those of the *Mediterranean*, and about seven Inches long, and an Inch broad.

Together with these Shells aforementioned, we sell the Inside of the Oyster-shells, after they have been calcined to a Whiteness, and made into Troches. It is observable, that it is difficult to preserve or keep those Troches whole, because they fall into Powder like Lime. Oyster-shells calcined make very good Lime, which is the Reason why the *Dutch* use nothing else. Some Authors, as *Ettmuller*, in a Treatise of his of Animals, say, that the Oyster-shells burnt are very proper to cure pestilential Buboës, being applied upon them: He observes, likewise, that they serve instead of Pearl. Besides these Shells there are Abundance of others, which I have not mentioned for three Reasons: The first, because they are not used. Secondly, because I have little or no Knowledge of them. And, in the third Place, because Mr. *Tournefort*, who has the compleatest Knowledge of these Curiosities, designs, in a little Time, to give the Public an exact Account of them.

Solen, Dactylus, vel Digitus, or the Finger-Shell, because of its Resemblance *Lemery*, to a Finger, is a small Shell, something larger than one's Finger, and an Inch thick, made up of two Pieces like the Muscles, but joined together at the End, and hollow like a Pipe. This contains in it a little Fish of the same Shape, which when it would feed, puts the Head out at the End of the Shell that is not joined together, and draws it in again like the Tortoise. This Fish is good Meat, when well washed from the Sand, whereof it is full. The Flesh is a little viscous, and it sometimes casts a Light like the *Phosphorus*. The Shell is alkaline, resolute, drying, opening, &c. being taken inwardly. The Dose is from half a Scruple to two Scruples. They use it externally in some Cerats and Ointments, in the Place of the *Dentalium*, which is scarce.

[This is the *Solen, Worm*. *Mus.* 256. The common Male and Female are the *Solen Maf. virgatus et subcæruleus*, and *Solen fæmina unicolor*. *Lister. H. Conch.* 9. 412. The calcined Shell is said to be a good Diuretick, but is never used at present.]

BOOK II. OF FOSSILS.

P R E F A C E.

I understand by the Word Fossil, every Thing that is found in the Bowels of the Earth; as Metals, Semi-Metals, Minerals, Bitumens, Stones, and Earths. As my Design is to begin with Metals, I shall first observe, that by the Word Metal, I mean a Body that is hard, of a Substance alike in all its Parts, that may be melted by the Fire, is ductile, and may be extended by the Hammer, and is different from Minerals, Bitumens, Earths, and Stones, as will be shewn hereafter. There is great Dispute concerning the Number of Metals; some will have them to be nine, others seven, and others six; those who make them nine, would have Quicksilver, Bismuth, and Brass, to pass for Metals: But as this Opinion is not well grounded, because Bismuth is not a perfect Metal, and Brass is a Composition, I shall agree with those who have concluded that the Number is seven, which answers to the seven Planets, and the seven Days of the Week; that is to say, Gold to the Sun, and to Sunday; Silver to the Moon, and to Monday; Iron to Mars, and Tuesday; Quicksilver to Mercury, and Wednesday; Tin to Jupiter, and Thursday; Copper to Venus, and Friday; and lastly, Lead to Saturn, and Saturday. Some Persons will have it that Mercury is but a Semi-Metal; but as I think it not proper to discuss that Matter here, I shall refer the Reader to the Chapter of Mercury, and begin here with Gold, which is the chief of all Metals.

1. Of Gold.

GOLD is the most perfect of all Metals, which has occasioned its being called the *King of Metals*, the most precious, the heaviest, and most malleable, and of a shining yellow Colour. Gold is brought from many Parts of the World, but it comes in the largest Quantities from the Mines of *Caravana* in *Peru*, and of *Valdivia* in *Chili*, where it is so common, that it has been used for the same Purposes as Pewter, Brass, or Iron are here; and though this is the richest Country for Gold of any that has come to our Knowledge, yet the Inhabitants are very poor, by reason of the Dearness of all Provisions. There are several other Places where Gold is found; but the greatest Quantity comes from *Peru*, because there it is most frequently found, and is refined with the least Trouble and Expence.

Africa, Asia, and Europe produce Gold of four different Sorts. The first is in Bits of different Sizes, which is so fine and soft, that you may make an Impression upon it with a Seal, as if it were upon Wax. This natural Gold is called *Virgin Gold*. The second is in Grains. The

third in Ore. The fourth in Sand. These three last Sorts are generally found after great Rains, in those Places through which the Torrents of Water have past; and even in the Bottom of Rivers, especially such as have run through Mines of Gold; as those of *Datzin* and *Diguira* in *Africa*, where there are Negroes who make it their whole Employment to search for it in the Bottom of the Rivers. We have Gold brought from several Parts, as *Peru* in the *West-Indies*, *Hungary*, and *Germany*, but the last is the worst of all. The Choice of Gold is to have it of as fine a Colour, and as pure as may be. The greatest Part of the Gold we have in *France*, comes from *Peru*, whence it is brought in Wedges or Ingots to *Cadiz*, by the *Spanish Galleons*. The Company in *France* bring from *Senega* a Gold which they call *En Aurillet*. This is wrought by the Savages, which they fetch from the Kingdom of *Galan*, which is near that of *Tombut*. The *Dutch* likewise bring Gold from *Sumatra*, and other Places of the *East-Indies*, together with their Peppers, and other Commodities of those Countries. There is yet another Sort of Gold, which is that of the *Alchymists*, of which I shall say nothing, because I have no Knowledge of

of it, leaving it to those who chuse to amuse themselves, and seek the Ruin of their Families, in an Operation that does not seem to have much Possibility in it. By the Means of Chymistry, they extract from *Gold* many Things that are useful for human Life. The first Preparation of *Gold* is the refining of it, which is done after four Manners; to wit, the first by Antimony, which is the best; the second by the *Cupel*; the third by *Aqua Regia*; the fourth by the *Cement*. They call that which is refined by Lead, and Ashes deprived of their Salt, or Bones burnt, *Coppel Gold*, which is that the Gold-beaters use to make *Leaf Gold* of. That which is refined by *Aqua Regia*, is called *Gold* by *Departure*, or *Precipitation*. Lastly, That which is called *Gold* by *Cement*, is that which is refined by the Means of a Paste composed of Brick, common Salt, *Sal Ammoniack*, *Sal Gem*, and Urine: There is a fifth Refinement of *Gold* by *Mercury*; but as these Matters are too long to be here particularly described, I shall refer the Reader to the several Books of Chymistry which treat thereof.

Regulus of Gold.

The *Regulus of Gold* is *Gold* refined by Antimony, and afterwards thrown into a Brass Mortar, warmed and greased in the same manner as that into which is thrown the *Regulus* of Antimony. This Operation is seldom used because of the Charge, and is seldom done but by such as have the Curiosity of having *Gold* that is extremely fine.

Leaf Gold.

What we call *Leaf Gold* is that which is refined by the *Cupel*, and then by the Help of a certain Kind of Skins, or Beasts Bladders (which the French Workmen call *Baudrucee*) is by Hammering reduced to Leaves extremely light and thin.

It is a surprizing Thing to think that a Gold-beater can reduce an Ounce of *Gold* into 1600 Leaves, each of which shall contain seven and thirty Lines square. And Monsieur *Furetiere* says, that they can reduce *Gold* into one hundred and fifty-nine thousand ninety two Times its superficial Size; and the Wire-drawers into six hundred and fifty one thousand five hundred and ninety Times. There are five Sorts of *Leaf Gold* amongst the Gold-beaters of *Paris*: The finest and most durable is that which is sold to the Sword-Cutlers; wherewith they work their gilt and flowered Blades. The second is that which they sell to Smiths and Armourers to gild their Iron and Weapons. The third is that which is used in gilding of Books. The fourth is used by Gilders of

Wood, and Painters. The fifth is that used in Physick, which the Apothecaries put into several of their Powders and Confections, as well for the Virtue of it, as for Ornament.

They grind these Leaves of *Gold*, or the Clippings of them, which they call *Braetolæ*, with Virgin Honey, and then put them into Muscleshells; and this they call *Gold* in Powder, or in the Shell. This *Gold*, so prepared, is used for Painting in Miniature.

Aurum Fulminans, or Crocus of Gold.

The *Aurum Fulminans*, or *Crocus Auri*, is *Gold* in File-dust dissolved in *Aqua Regia*, and precipitated into a brown Powder by Oil of Tartar per *Deliquium* poured upon the Dissolution. This Powder dried has much more Force, and takes Fire sooner than Gun-powder. This Preparation of *Gold* is a Sudorifick very proper in the Small-Pox, given from two Grains to six. It is likewise good to stop Vomiting, and suppress the too vigorous Operation of mercurial Medicines.

Amalgamation of Gold, or Gold-Powder.

The Powder, or ground *Gold*, is made by calcining *Gold* with Mercury and *Sal Ammoniack*; this is called *Gold* in Powder, or amalgamated, and is used by the Gilders, because it spreads easily. There are some who omit *Sal Ammoniack* in their reducing *Gold* to Powder, and only make use of Mercury. There are several other Preparations of *Gold*; as Tinctures, Extracts, and the pretended *Aurum Potabile*. But since they are not received by the World, I shall only say what all agree in, that the greatest Property of *Gold* is to give all Sorts of Perfections and Conveniences to him that is Master of it.

Gold, in Latin, *Aurum*, *Sol*, *Rex Metallorum*, is the most solid, weighty, compact, and precious of all Metals. It is generated in many Mines in different Parts of the World; but the greatest Quantity is brought in Bars or Ingots from *Peru* to *Cadiz* by the Galleons of *Spain*. There is *Gold* likewise found in *Asia*, *Africa*, and *Europe*, sometimes in a Mass, which is called *Virgin-Gold*, sometimes in Grains, sometimes in Ore, sometimes in Dust or Spangles.

The first is called *Virgin-Gold*, because it comes pure out of the Mine, without any further need of Preparation, and is so soft as to receive the Impression of a Seal, and is found in greater and lesser Pieces.

The second is in Grains; but not so fine as the first.

The

The third is a Gold mixed with other Metals, and the Marcasite or Mineral Stone, which are formed together as a Stone, called *Gold Ore*. The fourth is a Gold in Dust, or Spangles mixed with Sand.

The three last Sorts of Gold are generally found at the Bottom of Rivers, after great Rains and Torrents of Water, and the Negroes either dive for or wash them out of the Sands.

Gold is refined several Ways; by the Cupel, by Departure, by Cementation, and by Antimony.

The refining of Gold by the Cupel and Departure, is done after the same Manner as that of Silver, of which hereafter.

Gold is refined by Cementation in the following Manner: They make a hard Paste with *Sal Gem*, and *Sal Ammoniack*, Chalk, and Urine. This Paste is laid with Gold, *stratum super stratum*, in a Crucible, which is placed in a Furnace, and a large Fire being made about it, the Matter is left to calcine for ten or twelve Hours, that so the Salts may penetrate the Foulness of the Gold, and throw it off in *Scoria*; and so the Crucible being taken off from the Fire, the Gold will be found separated from the *Scoria*.

Gold is refined by Antimony after this manner: They weigh the Quantity of Gold they would refine, and make it red-hot in a Crucible, by a strong Fire, and then throw in four Times the Quantity of Antimony in Powder; soon after which the Gold will melt, for Antimony is full of a saline Sulphur, which not only very much augments the Heat, but, piercing into the Metal, divides the Parts very speedily: Then the impure or gross Matters that were in the Gold is swallowed up by the Antimony, to which they readily join themselves, and so separate into *Scoria*, of which the more volatile Parts are dissipated into Smoke. They leave this Matter in the midst of a great Fire, till it sends forth Sparkles, and then they pour it into an Iron Mortar warmed and greased, beating it about till the *Regulus* fall to the Bottom. When all is cold, they empty the Mortar, and with a Hammer separate the *Regulus* from the *Scoria*. They weigh this *Regulus*, and put it into a Crucible over a strong Fire, to be melted a second Time; then, by little and little, they throw in three times as much Salt Petre to purify the Gold from any of the Antimony that may happen to remain. They continue a very violent Fire about the Crucible till the Fumes are gone off, and the Gold remains in Fusion clear and neat: Then they turn it into a Mortar as before; and, when it is cold, they separate the *Scoria* that are found underneath it; then they wash it, and wipe it with a Cloth. This *Regulus* of Gold is as fine as possibly can be; and this

Way of refining is preferable to all others, when they would cleanse Gold exactly from other Metals.

The Cupel will cleanse Gold very well from *Marcasites*, and even from such Metals as are called imperfect, but not from Silver. This Metal is so bound up and joined with Gold, that Recourse must be had to the Departure before it is possible to separate them.

Though the Departure separates Gold from Silver; yet when the Gold is precipitated, it generally carries with it some Portion of the Silver.

The Cementation often leaves the Gold undischarged of some Particles of other Metals, and the Salts entering into the Gold, dissolve a little of it. But Antimony is a Devourer, which spares no other Metal but Gold; yea it will oftentimes gnaw off some little Portion of it, and by that Means create some Displeasure to the Refiner.

The Degrees of the Fineness of Gold are called Carats: A Carat of Gold is of the Weight of a Scruple, and by consequence twenty four Carats make an Ounce.

Gold that is entirely fine, is called Gold of twenty four Carats; because if you put an Ounce of such Gold to the Proof, it will not be diminished: But if an Ounce of Gold will waste a Scruple in the Proof, it is Gold of twenty-three Carats; if it waste two Scruples, it is Gold of twenty-two Carats, and so of the rest. But many Refiners believe that there is no Gold of twenty-four Carats; for let them refine it never so well, there will still remain some light Portion of Silver. Gold easily mixes and unites with Quicksilver, and this is what is called *Amalgama* of Gold. To make it, they put Gold cut into very minute Pieces into a Crucible, leaving it to be red-hot; to this they put eight times as much Quicksilver, stirring it with a small Iron Rod, and when they find it incorporated, they cast it into an earthen Vessel full of Water, where it cools and remains soft as Dough. They wash it several Times to take away the Blackness, they then separate the superfluous Mercury, that is not well united to it, by putting it into a Cloth, and pressing it gently with the Fingers. They throw a great deal of Quicksilver upon Gold, that it may charge itself with it as much as possible; for the more Mercury enters into the *Amalgama*, the softer it will be, and the more pliable; but Gold can receive no more than a certain Quantity, because when its Pores are once full, the rest that is added is useless.

The *Amalgama* of Gold is used by the Gilders, because it is easily spread over the Work prepared for it.

Gold, when refined, will be extended by the Hammer more than any other Metal. The Gold-beaters

Beaters reduce it into very thin Leaves, which they put into little Books. These Leaves of Gold are used for Gilding. They are used likewise in compounding of Medicines, and are preferable to all other Preparations of this Metal; not only because they are easily mixed, but because they appear like Spangles, which beautify and set off the Composition.

As Gold is the most weighty, the most compact, firm, and beautiful of all Metals, so it has likewise been esteemed the most perfect; and a numerous Sect of Philosophers, called Alchymists, have thought that the Production of Gold was the principal Design of Nature in all Mines; and that it had been obstructed from its due Course by some Accident, when it produced other Metals. But this Opinion is not approved by all; and one may very reasonably believe that Iron, Lead, Copper, and other Metals, that are called imperfect, have the Perfection which they ought to have, according to their own Nature, as well as Gold. This Sentiment of the Alchymists has led them into another Chain of Reasonings, which are not more just than the former: They believe that they can perfect the imperfect Metals, by supplying the Failure of Nature, and consequently that they can make Gold. It is this Operation, which they call the Great Work, or the Search of the Philosophical Stone. To arrive at which, some of them make a Mixture of these Metals with some Matters proper to refine them, and calcine them a long Time in a strong Fire, to arrive at their Perfection, as if Nature had wanted Heat to produce them.

Other put Metals into a Digestion upon the Fire, in saline and piercing Liquors, so to draw out the Mercury, which they say is a Matter disposed to be reduced into Gold.

Others seek for a Seed of Gold in Gold itself, and believe they shall find it there, as they do the Seed of a Vegetable in a Vegetable, and that of an Animal in an Animal. To accomplish this, they endeavour to open Gold by Dissolvents; and they put it to digest by the Fire of a Lamp, or the Heat of the Sun, or that of Smoke, or Fume, or some other Degree of Heat, always equal, which approaches nearest to that which Nature makes use of.

Others look for the Seed of Gold in the Minerals, as in Antimony, where they pretend there is a Sulphur and a Mercury like to that of Gold. Others hope to find it in Vegetables, as in Honey, Manna, *Rosa Solis*, and Rosemary; and others in Animals, as in the Spittle, the Blood, the Brain, the Heart, and the Excrements.

Others imagine they can catch the Seed of Gold, by fixing the Rays of the Sun after a certain Man-

ner; for they look upon it as a thing incontestable, that the Sun is Gold melted in the Center of the World, and that it is cupelled by the Fire of the Stars that surround it; and that the Rays which it casts, and that shine on all Sides of it, are the Sparkles which rise from it after the same Manner that they do in refining Gold by the Cupel.

I should enlarge too much, if I would here repeat all the Fancies of the Alchymists, and the Manners of Working, which they have invented to arrive at the Perfection of their Designs. They have spared neither Time, Pains, Watching, Care, nor Money; and a great many of them having spent the better Part of their Life in this Labour, have so exhausted their Spirits, their Healths, and their Pockets, that they have fallen into a deep Melancholy, Madnefs, incurable Diseases, and a most miserable Poverty.

But the ill Success of these Alchymists has not hindered other Persons from entering the same Lists; the Hopes with which they flatter themselves, that they shall find the Means of making Gold does so far prepossess their Minds, that they become incapable of thinking seriously of any other thing than what may contribute to the grand Work. They think no body reasons so well as the Alchymists. They treat all People that do not come up to their Sentiments as Infidels, and they assume to themselves, exclusive of all others, the Name of the true Philosophers, or the Philosophers, by way of Excellence. If they speak, it is by Monosyllables; if they explain themselves, it is in such obscure Terms, and heightened Expression, that very often they do not understand themselves. If they write, it is that it may not be comprehended. If they work, it is with Mystery, giving sublime Names to all the Ingredients they make use of. Gold is by them called the Sun; Silver, the Moon; Tin, Jupiter; Lead, Saturn; Sal Armoniack, the solar Salt, or the Mercurial Salt of the Philosophers; Nitre is *Cerberus*, or the infernal Salt; the Spirit of Nitre, the Blood of the *Salamander*; Antimony, the Wolf, or the Root of the Metals, or *Proteus*; and so of the rest. Their Preparations are all philosophical; and even the Bricks of which they build their Furnaces participate of that Quality. Besides, these Gentlemen look upon themselves to be far above all other Persons. They think they are the Depositories of the richest Secrets of Nature. They explain every thing to their own Advantage; and, according to their own Prejudices, they call themselves the Holy Nation, and the elect People. King *Solomon*, according to their Opinion, was of the Sect of Alchymists, because Gold was so common in his Days. And the Spirit

of God which swam upon the Water, and is spoken of in *Genesis*, was the universal Spirit of which Gold is made. I could relate a great many more of their Opinions, as extravagant as these, but I am afraid of growing tedious to the Reader.

That which the Chymists aspire to by their great Labour is, as I said before, to find out the Seed of Gold. And several of them pretend that they have attained to it, and are in full Possession of it, and it is this which they call the Powder of Projection. They attribute to it the Virtue of turning any Metal whatsoever into Gold; but we see no Experiments of this pretended Fact: Those that have been made upon several Occasions, have been only Tricks, or Slight of Hand, by which they throw Dust into Peoples Eyes, and engage them to blow the Bellows, and bear Part of the Charges with them.

It is easy to apprehend that the Seed of Metals is not to be found in them, because their Production does not arrive by Vegetation, as in Plants, but proceeds from a Congelation that is made by Waters, loaded with Salts of different Natures, and sulphurous Earth, as they have acknowledged who have wrought in them.

The Alchymists say, that their Seed of Gold is a Mercury which they have drawn from Metals; but besides that it is still a Question, whether they can draw a Mercury from Metals, it is not probable, that if they can draw it, it should be the Seed of Gold.

They affirm likewise, that the Seed of Gold is in every thing, that it abounds in the Spirit of the Universe, and that Dew, Manna, and Honey, having the Impressions of the Spirit, the Seed of Gold may therefore be drawn out of them. We agree with them, that the Universal Spirit serves to the Production of Gold, as it serves to that of other Mixtures; but it is by an Acid that it contains, and not by a Seed, at least the Name of Seed is never given to this Acid; and then there is no more Reason to think that the Universal Spirit abounds in the Seed of Gold, any more than in the Seed of the grossest Mineral, the most useless Plant, or the most despicable of Animals.

Although all the antient Authors have esteemed and prescribed Gold as the greatest Cordial, when taken inwardly, yet we do not find this Virtue to be in it; for Experience shews us, that it passes by Stool in the same Weight and the same Condition in which it was taken, because it is too hard to be penetrated and digested by the weak Acids of the Body: But it is however proper, and very convenient for them who have taken too much Mercury, for it amalgamates with it in the Body, and fixes it in such a Manner, that it hinders it

from acting as it did before. And this Mixture is afterwards thrown out by Stool or Urine. It is likewise good for Colick Pains of the Glaziers and Plumbers, which are caused by the Vapours of their Lead.

Mercury clings so easily to Gold, that if a Person salivated with Mercury has any Pieces of Gold in his Pocket, they will commonly grow white in a little Time, without his touching them. But this Mercury is expelled by putting the Gold in the Fire, and afterwards rubbing it with a little Oil of Tartar.

The *Aurum Potabile* of the Chymists is nothing but a Chimæra: They pretend that they can resolve Gold into its first Principles, and separate the Salt and Sulphur of it, so that they cannot be revived into Gold any more than the Oil and Salt that are drawn from a Vegetable, can be put into the same Plant again. They call these pretended Salts and Sulphurs of Gold, potable Gold, because they can be dissolved in all Sorts of Liquors, and be taken as a Potion: They attribute to it the Virtue of being a Preservative against all Sorts of Illness, and say that it cures all Diseases, prolongs Life, and, in a word, is the universal Medicine.

The noble Qualities of the *Aurum Potabile* are grounded upon many other Chimæras. The Alchymists and Astrologers affirm, that there is a great Correspondence, and a peculiar Intercourse between the Sun and Gold, by the Influences which they communicate one to the other; and that Gold is therefore consequently impressed with the Influences of the Sun: That the Sun is the Heart of this great World, and having that Quality, it ought, by the means of Gold its substitute, to display its Virtues over the Heart of the little World, which is that of Man. That the Quality of the Sun is to warm, revive, rejoice, and cleanse the Body from all ill Humours, and to render Life happy, long, and free from Distempers: That all their Principles being certain, there is no Room to doubt that Gold has these excellent Virtues; but that as this is a Body very hard and solid, its Qualities are so enclosed and concentrated, that they cannot be well perceived without reducing them to their first Principles, which are the Sulphur and the Salt that they call *Aurum Potabile*.

It is not difficult to confute all these Arguments; they are so weak, and have so little Foundation, that they fall of themselves. *First*, The Alchymists take it for granted, without proving it, that Gold can be resolved into its first Principles, so that Salt and Sulphur may be drawn out of it; but this Metal is really so solid, and so conjoined in its insensible Parts, that they could never find

find a Means to dissolve it radically, nor to separate any of its Principles, notwithstanding all their Pains and Application. They extend, they divide, they attenuate, they rarify it, into insensible Parts, by Means of their Dissolvents, but hitherto they have done nothing but disguise it; for it still remains entire Gold, and is ready to be reduced to its primitive State by Fusion. The other Preparations of Gold, which some Persons would put upon us for the Salt and Sulphur of this Metal, are found, when strictly examined, to be nothing else but Gold extremely rarified, dissolved, and disguised by some Ammoniacal Salt; but this Gold is revived again, by freeing it from this Salt, and making it pass through the Fire.

Nay, though in Process of Time they should come to be able to dissolve Gold radically, so as to extract the Salt and Sulphur, yet it would still remain a Question, what would be the Virtue of these Principles? Which could only be known by the Experiments that should be made with them; but there is Room to believe, that the Effects would be different from what they would persuade us. The Intercourse of Gold with the Sun, and the peculiar Influences that they would have it receive from thence, are Fancies, which carry no Probability with them: We see the Sun displays its Warmth and Rays upon all Bodies, without any Appearance of its making a Distinction.

Although there is no *Aurum Potabile* in the World, and that it is uncertain what Effect it would have could we find it, yet the very Name of *Potable Gold* imposes upon a great many People, and gives an Opportunity to Mountebanks to cheat them with Impunity; for they draw Tinctures from some Ingredients, whose Colours come near to that of Gold, and sell them at a very great Rate, under the Title of *Aurum Potabile*. This Sort of Cheat is what generally succeeds best; for Patients are prepossessed in Favour of such Medicines as carry great Names, and have a specious Appearance: Men are likewise apt to cry up that which is dear. So the Name and the Price gains an Estimation. It likewise often happens, that these Tinctures, which go by the Name of *Aurum Potabile*, produce some good Effect, because they can take care to make them with such spirituous Menstruums, as comfort the Heart, and expel ill Humours by Perspiration; then it is cried up for a Miracle, and the Effect is attributed to the Gold, which can have no Share in it, as having never entered into the Liquor.

Others, who are less Cheats than those I have spoken of, dissolve Gold in some spirituous Liquors, after the common Manner; and as the Dissolution of Gold is always yellow, they make it pass for

the true *Aurum Potabile*, altho' it is only Gold divided, and may be reduced to the same State that it was in before.

Besides, I cannot see that the Perfection of Gold must necessarily give it the Preference in Physick to other Metals; on the contrary, this Perfection, being an exact Contexture of the Parts, and a very great Solidity, is a Reason why this Metal is so much the less disposed to be digested and distributed into the Vessels of the Body; Iron, Mercury, and the other Metals, which are called imperfect, are much more tractable, for we put them into a Way of penetrating through the whole Body, and producing considerable Effects: What is Perfection with the Workman, is often an Imperfection with the Physician; and we make better Use of the mixt Bodies, whose Principles are naturally rarified and dissolvable, than of those, which through too much Firmness are rendered, as it were, incorruptible.

[To what has been already observed, it may be added, that Gold is often found in Orpiment, in a kind of *Pyrites*, of an ashy purplish Colour, and hid in the Ores of other Metals, especially Silver.

Gold, in all common Fires remains fixed, and even when exposed to the Focus of the strongest Burning-Glass, suffers that Heat a great while before it begins to evaporate: it never contracts Rust, and is only dissoluble in *Aqua Regia*, but may be calcined by common Sulphur if set on Fire and flaming. The Analysis or Resolution of this Metal, has hitherto been attempted without Success; its Sulphur and Earth are so strictly united as not to be separable by the common Powers of Fire, and before the Burning-Glass entire Parcels of it fly off, without any apparent Resolution into its Principles.

The Use of Gold in Physick was unknown to the ancient *Greeks*; the *Arabians* first gave it inwardly, imagining it must have great Virtues, but in all Probability it has really none, and the present Practice knows it in no other Intention, than the gilding Pills and Boluses.]

2. Of Marcasites.

UNDER the Name of *Marcasite*, according to Monsieur *Morin*, Doctor of Physick of *Montpellier*, is to be understood a metallick Mineral, which is loaded with Sulphur and Earth. This in the Fire swallows up the metallick Matter which gets loose, and the Sulphur carries up with it Parts which being more subtil, mercurial, and less fixed, are evaporated;

so that there remains nothing but a Body, which is vitrified and useles.

Altho' from this imperfect Mineral, no Metal can be drawn by Fusion, whatever else be mixed with it to promote the Separation, yet it is much searched into by all true Chymists, and preferred to those from which Metals may be extracted, which some improperly call *Marcafites*; and it is with just Reason, for the Principles not being yet well united, it is the less difficult to separate them, and consequently to determine and multiply them by their Operations.

They who work in Mines throw these Substances by, and separate them from the Ore, which is so much the better, by how much the less Earth and Sulphur there is in it.

It is easy to conceive, that each Metal has its proper *Marcafite*; which is, as it were, its Seed or Bud; and the more it ferments, and the nearer it approaches to a metallick Perfection, the farther it recedes from the Nature of a *Marcafite*.

It must nevertheless be observed, that we sell commonly but three Sorts of *Marcafite*, which are those of Gold, of Silver, and of Copper. That of Gold is usually a little round Ball, very weighty, and difficult to break. That of Silver is almost of the same Make, but is not so high coloured. That of Copper is either round or long, and oftentimes irregular, and of the Largeness of a Tennis Ball. This *Marcafite* is very hard, but if you leave it in a moist Place, the Moisture will penetrate it, and turn it all to Vitriol, and so it comes to nothing. When you break in Pieces these *Marcafites* of Copper, they are of a yellow Gold Colour, and radiated like a Sort of Sun. These are the Descriptions of the *Marcafites* we commonly sell, but for those of Iron, Tin, and Lead, I cannot, to this Day, learn positively what they are. There are some who affirm positively that the Load-Stone is the *Marcafite* of Iron; the Bismuth, or natural Tin-Glass, that of Tin; and the Mineral Zink, or Spelter, that of Lead. And there are others who say that Tin and Lead are the same thing, and differ only in Colour, grounding themselves upon this, that the Antients called Tin White Lead, and Lead Black Lead, so that there cannot belong to them two Sorts of *Marcafites*; and my Sentiments must concur with theirs; seeing it has not been possible for me to find any natural Bismuth or Tin Glass, as I shall shew hereafter.

It is remarkable, that tho' I say we sell but three Sorts of *Marcafites*, yet there are very few large Druggists Shops where there are not found several other Sorts, as the square, the flat, the grey, the black, the yellow, and the like.

And this happens, because they give the Name of *Marcafite* to every thing they do not know, and take to be Mineral; and the Buyer, not knowing what it is, any more than he that sells it, it often happens, that they who work it are deceived, and lose their Labour.

I have by me a white *Marcafite*, full of Veins of Gold, which was brought from the *Isles*, and was affirmed to me to be true Gold Ore.

The *Marcafite*, is a metallick Mineral, of which there are several kinds; for all *Lemery*. Stones which contain more or less of a Metal are called by this Name. But three Sorts are more principally intended by the Word *Marcafite*; that of Gold, that of Silver, and that of Copper.

The two first are in little Balls, of the Bigness of a Nut, almost round, weighty, brownish without, but of different Colours within; for one has the Colour of Gold, the other of Silver, but both bright and shining.

The *Marcafite* of Copper is as large as a little Apple, round or oblong, brown without, yellow and crystalline within, bright, sparkling, and easy to be broken.

The *Marcafites* are taken out of the Mines. They contain a great deal of Sulphur and vitriolick Salt, especially that of Copper.

[The *Marcafites* of the *Arabians*, were the various kinds of the *Pyrites*, and since their Times various imperfect Ores have been known in the Shops, under the Name of *Marcafites*, with the Addition of that of the Metal they were supposed to belong to, but what is now kept there, under the Name of *Marcafite*, without any Addition, is Bismuth or Tin-Glass, of which we shall treat hereafter.]

3. Of Silver.

SILVER, which the *Spaniards* of *Peru* *Pomet*. call *Plata*, is the best and most perfect Metal next to Gold. It is white, hard, extensible, and very agreeable to the Sight. It is also called *Luna*, because of its bright white Colour, and the Influences it was supposed to receive from that Planet. The most famous Mines for Silver are those of *Rio de la Plata*, that is the *River of Silver*, and of *Potosi*, in *Peru*, which were discovered in the Year 1545. The Enclosure which bounds the Extent of them, is called *Potosi*, which is a Mountain situated in a flat Champain, rising in the Form of a Sugar-Loaf, above a League in Circuit below, and a Quarter of a League on the Top. The Silver coming out of the Mine is refined with Mercury, or Quicksilver; and there have been some Years in which they have taken out

of these Mines three hundred thousand Weight of Silver, pure and neat; for the refining which they made use of six or seven hundred thousand Weight of Quicksilver; for the more they refine it with Quicksilver, the better it is. There are several other Silver Mines in the *Indies*, in *Europe*, and even in *France*.

Silver is of itself a very pure Metal, and especially when it has been well refined, the Chymists perform several Operations upon it; the first of which is its Purification.

Purification of Silver by the Cupel.

Silver purified by the Cupel, is Silver which is put into melted Lead, and by means of the Fire, and a certain Quality inherent in it, the Lead works upon the Silver as the White of an Egg does upon Sugar, separating all its Dross when it is well refined. They granulate it after the Manner that we see it, which, if it be Proof, ought to be well refined, white, and very shining. This sort of Silver is made use of in several of the following Chymical Operations.

Of the Crystals of Silver, or the Vitriol of Luna.

They extract the Crystals of Silver from cupelled Silver dissolved in Spirit of Nitre, when the Moisture is almost evaporated, they take out the Crystals, which being applied to the Flesh, make an *Eschar*, as the *Lapis infernalis*.

Of the Lapis Infernalis, or the Silver Caustick.

The *Infernal Stone* is so called, because of its burning Quality, and its black Colour. It is made of cupelled Silver dissolved in Spirit of Nitre, afterwards perfected by the Fire, and poured into a Mould, warmed and greased on the Inside, where growing cold it coagulates, and becomes a Stone of the same Shape that the Mould has given it.

This Stone ought to be made choice of in little Pieces of a Finger's Length, dry and solid, of a brown Colour, approaching to that of Iron, which will neither burn the Fingers nor Paper, unless moistened, and does not melt, when exposed to the Air, without Difficulty, but will immediately burn any Place that is moistened as soon as it is laid upon it; which are the true Marks of the *Infernal Stone*, when rightly prepared with the cupelled Silver. You ought to reject that which is green, and turns the Paper it is wrapt in of that Colour, that grows wet, and is easily dissolved in

the Air, because it is made with Copper. Some use the common Plate Silver, or the Burnings of old Silver Lace, but the Stone they make is not so good as the other. This Stone is much used by Surgeons to burn and consume dead and superfluous Flesh; but special Care must be taken not to touch the sound Flesh, because the Stone will not fail to burn it, and cause an Extremity of Pain, especially if the Place be wet.

The *Lapis Infernalis* has the Property of staining Marble, and entering into it; so that upon sawing the Marble, the same Figure shall appear within that was on the Outside, and will never wear out. You work with it as if it were a Crayon, and the Colour it makes is black.

Of the Tincture of Silver.

The *Tincture of Silver* is a Dissolution of Silver in Spirit of Nitre, which they precipitate by means of a Solution of Salt; then they put this Silver *Calx* into Spirit of Wine acuated with volatile Salt of Tartar, and volatile Salt of Urine, and thence draw a beautiful, celestial, blue Tincture, very much recommended against the Epilepsy, the Palsy, Apoplexy, and the other Diseases of the Brain. The Dose is from six to fifteen or sixteen Drops.

Silver, in Latin *Argentum*, or *Luna*, *Lemery*. is a Metal very compact, weighty, hard, white, smooth, and shining, very extensible by the Hammer; and resisting the Cupel. It is taken from several Mines in *Europe*, but the greatest Quantity comes from *America*, and especially from *Le Riode la Plata*, in *Peru*, where it is often found intermixed with small white crystalline Stones, and with Gold, Copper, or Lead. Being taken out of the Mine, it is refined with Quicksilver, and then transported. They who would render it as fine as possible, refine it by the Cupel, and by Departure, in the following Manner:

They make the Cupel red-hot in the Fire, and they put four or five Times as much Lead as Silver to cupel it; they let the Lead melt, and extend itself, so that one Part of it, in a little Time, enters into, and fills the Pores of the Cupel; they cast the Silver into the midst of the Cupel, where it is not long before it melts; they blow the Fire till it is so strong, that the Flame encompasses the whole Matter; then all the Impurities unite with the Lead, because that Metal being sulphureous, it cleaves to and embraces the gross Bodies better than the Silver. The Fire drives the impure Mixture to the Circumference, in the same manner as Scum, or *Scoria*, and the Silver remains fine and clean in the Middle. They know

know that the Refinement is perfected, when no more Fume arises; then they pour the Silver into a Mould, to let it cool, and this they call Silver of the Cupel. The *Scoria* of Silver, mixed with Lead, make the Litharge, of which I shall treat hereafter. These *Scoria* consist of the Parts of some other Metals, or the Marcasites which were mixed with the Silver when it is taken out of the Mine.

It is to be noted, that Silver, being thrown into melted Lead, runs sooner into a Fusion, than if it were put alone to melt in a Crucible, because the sulphureous Parts of Lead contribute to the speedy Fusion of Metals.

This Purification of Silver clears it from all other Metals but Gold, which likewise resists the Cupel, so that one cannot be altogether assured that this Silver of the Cupel is entirely Silver; therefore if one would separate it from any little Quantity of Gold that may be in it, Recourse must be had to another Operation, called the *Departure*, and this is the Manner of Proceeding.

They melt together in a Crucible by a strong Fire, three Parts of Silver, and one Part of Gold: They throw this Mixture, when melted, by little and little, into cold Water, where it coagulates into Grains; they throw away the Water, and dry these Grains, and then put them to dissolve in two or three Times as much *Aqua Fortis*; the Silver is dissolved, and the Gold is precipitated to the Bottom of the Vessels, because it cannot be penetrated by this Dissolvent.

It is to be remarked, that in this Operation they mix Gold with the Silver, that if the Silver should contain any small Quantity of Gold, it might be drawn precipitated along with that which was added. This precipitated Gold is called *Gold by Departure*, and they can easily turn it into an Ingot, by melting it in a Crucible over the Fire, with a little Borax, and pouring it into a Mould.

This Dissolution of the Silver is thrown into an earthen Vessel, in which there is a great deal of Water, and a Plate of Copper, where it is left for five or six Hours, or till all the Silver is precipitated, and sticks to the Copper Plate, and then they gather it together and dry it; and it is this they call the Precipitate of Silver, and sometimes the Calx of Silver. The Water in which this Precipitation was made, becomes blue, because of some Portion of Copper dissolved in it, and is called the *Second Water*; it is used to deterge, and to eat proud Flesh, being applied outwardly.

Silver also may be precipitated, by mixing Salt Water in the Dissolution; for the Sea Salt will produce the same Effect as the Parts of the Cop-

per, that is to say, by pushing rudely against the Points of the *Aqua fortis*, which hold up the Particles of the Silver, it will break them, and make them let go their Hold, so that the Silver having nothing to support it, will, by its own Weight, fall to the Bottom.

The Silver, so precipitated, is cast into an Ingot, by melting it in a Crucible, with a little Salt-Petre, and afterwards pouring it into a Mould. This Silver is the finest of all, and of twelve Penny-Weight, if it has so much; but there is always some little Alloy of Copper to be found in Silver, let it be never so well refined.

That which is called *Carat* in Gold, is a Penny-Weight in Silver; so an Ounce of very fine Silver is of twenty Penny-Weight, or twenty-four Scruples, which make twenty-four Times twenty Grains. This Ounce of Silver should not be diminished by the Proofs; but if it lose a Scruple by the Cupel, the Silver is but of nineteen Penny-Weight sixteen Grains; if it loses two Scruples, it is seventeen Penny-Weight twelve Grains; but they do not express themselves by twenty Penny-Weight in Silver, as they do by twenty-four Carats in Gold; for they double two Pence in Silver, and say Silver of twelve Penny-Weight, to express Silver of the utmost Purity; Silver of eleven Penny-Weight and an half, Silver of eleven Penny-Weight, to denote the Degrees of its Fineness, and so of the rest.

Plate Silver contains one Part Copper to twenty-four Parts Silver; and Silver of the Cupel has but one Quarter Part Copper, to twenty-four Parts of Silver.

They beat the purest Silver, and reduce it into very fine and thin Leaves, which we make use of in Medicine. One may likewise use the Precipitate of Silver instead of these Leaves.

Silver is proper for those who have used too great a Quantity of Quicksilver, either by Frictions, or taken inwardly, for it binds or amalgamates itself with it in the Body, and depriving it of its Weight, takes away its Virtue. It may be taken from four Grains to a Scruple, and a larger Dose may be given without Fear of any Danger. It is pretended by several Authors to be an infallible Medicine for Diseases of the Head and Brain; but Experience shews us, that it is of no Use in such Cases.

The Astrologers and the Alchymists call it *Luna*, because they imagine this Metal to be of the same Matter as the Moon, and that it receives continual Influences from her for its Nourishment.

[Silver, as found in the Mines, is distinguished into native, and rude; the native is that which is found pure in the Mine, either in Fissures of Rocks

Rocks or Stones, or mixed with Sand or Earth without Stones. This is seen in many various Forms, in small oblong Veins, fimbriated, in small Filaments like Hairs, granulated, in the Form of Branches of Trees and in large Masses. Rude Silver is that which is found in Ores and must be refined by Fire : The Silver Ores are in some Mines red, which is occasioned by their being mixed with Arsenick, in some of a Lead Colour, which is owing to the Sulphur contained in them, in other Black, Purple, Ash coloured, &c. according to the different Substances they are mixed with; it is also found in Gold, Copper, Tin, and Lead Ores in different Quantities. Almost all the Lead Mines in *England* contain more or less Silver, but the richest are those in *Cardiganshire* in *Wales*. Silver is easily separated from Lead, as observed by our Authors, but the extracting it from the *Peruvian* and *Mexican* Ores is much more difficult, because the Ores are hard, and mixed with vitriolick, arsenical, or other Substances, which carry off with them a considerable Quantity of Silver, or burn it to *Scoria* with themselves.

Silver is harder, and less ductile than Gold. Its specific Gravity to that of Gold is a little less than as five to nine, so that it is lighter than Lead; it never contracts Rust, and is dissoluble by *Aqua fortis*, and not by *Aqua regia*. It is not destroyed by Lead, but being long exposed to a strong Fire with Antimony, is something diminished by the sulphureous Parts of that Metal. When exposed to the Focus of a great Burning-Glass, it flies all off in Smoke but very slowly, and does not vitrify, as many other Metals do; the Solution of pure Silver is limpid, and its Crystals are of no Colour, but if it contains any Copper the Tincture is greenish or blueish, the Taste of the Crystals is intensely better. Silver made to mix with common Salt, melts into a semi-transparent Mass resembling Horn; this is called *Luna cornea*, and it is very difficult to reduce it to Silver again, because being volatile, if it be exposed to a strong Fire it flies almost all off in Vapour. Notwithstanding all that has been said by the *Arabians*, and since them by the Chymists, in Praise of the medicinal Virtues of Silver, it is yet a very great Question whether it really has any or not, and the principal Use made of it in the Shops, is in the Leaf to cover Pills and Boluses, instead of Leaf Gold, which is so often adulterated, that many fear to use it. It is also to be observed, that all the blue Tinctures of Silver, so highly commended by the Chymists, are not Tinctures of Silver but of the Copper contained in Silver; and therefore very unfit for internal Use, for a true

Tincture of Silver must be altogether colourless, like Water.]

4. Of Iron, or Mars.

IRON, which the Chymists call *Mars*, *Pomet.* because of the Influences they pretend it receives from that Planet, is a Metal the hardest, driest, and most difficult to melt of all others. It is composed of an Earth, a Salt, and a Sulphur, ill digested, and ill united, which makes it subject to Rust. There are Mines of Iron in *Spain*, *Germany*, *Sweden*, and *England*. The best in *France* are those of *Champaigne*, *Lorain*, and *Normandy*. There are some in *Burgundy*, *Berry*, and other Places. An Iron Mine is sometimes found within an Inch of the Surface, sometimes one, two, three, four, five, or six Feet deep. The Ore is found in different Manners, sometimes in Pieces, and sometimes in Sand. I shall not discourse here of finding out Mines by the Jugglers with a Rod of Hazel, because Monsieur the Abbot de *Vallemont* has lately written a very exact Treatise about it.

The Manner of taking Iron from the Ore, and making it into cast Iron, and commonly called Sow-Metal.

After the Ore is taken from the Mine, they wash it in a running Water, to separate the Earth from it, and then carry it into large Furnaces, where covering it with Coals, Flint-Stones, and Potters Clay, or Earth, by the means of two large Pair of Bellows wrought by a Water-Mill, it melts like Lead; and after scumming from it a Dross, which when cold becomes like Glass, they stay the Bellows, and with an Iron Bar open a Hole which is in the Bottom of the Furnace, and immediately there comes out as it were a Stream of Fire, which runs into Holes made in the Nature of Moulds, of six, seven, or to ten Feet long; and a Foot broad. The Iron, thus thrown into these Moulds, is what the Smiths call Sow-Metal; or cast Iron. It is to be remarked, that when they would make Cannon-Bullets, Mortars, Weights, Backs of Chimneys, or other Works, of this Sow-Metal, or cast Iron, they take up the running Metal in great Iron Ladles, and put it into Moulds made in deep Sand, or else of cast Iron.

It is also to be observed, that the finer the Work is to be, the longer is the Metal to remain in Fusion; for the Matter continues but twelve Hours for the coarser Works, and fifteen or eighteen Hours for the other. The cast Iron of *France* cannot be touched by the File, as that of *Ger-*

many

many and other Places, but must be polished with Masons Dust, or Emery.

Of Iron in Bar, and other Kinds.

When they would reduce this Metal into fine Iron, they take one of these Lumps of Sow-Metal, and carry it to a Sort of Forge, on a Level with the Earth, in the Middle of which is a Hole, into which the Matter flows as it melts. They melt the Metal by the Means of Charcoal, and two great Pair of Bellows, which are moved by Water. As this Matter melts, the Refiner stirs it with an Iron Bar; and the more vigorously the Matter is stirred, the more kindly will the Iron be, and be better qualified. After it is well stirred, they carry the Matter, when a little hardened, with large Tongs, to an Anvil, where, with a great Hammer, they beat it, to force out of it the Earth or other foreign Matter that might have remained in it; and then the Iron is made, and will endure the Filing. When they would reduce it to Bars, or any other Fashion, they take this Mass, which the Workmen call the *Piece*, and carry it to another Forge, and by the Help of Charcoal, and two Pair of Bellows wrought by two Men, they make it red hot, and then carry it to the Anvil, and with a wooden Hammer, with Iron at the End of it, they make it as long and as thin as the Hammerer pleases. There is one Thing remarkable, that is of no small Consequence, which is, that seeing the Hammerer can reduce but half this Piece into Bar, because he must hold it fast by the other Part, he therefore, with us, to cool it the sooner, that he may go to work upon the other Part, throws it into Water; and this is the Cause that the *French* Iron is brittle: But this might be easily remedied, by letting it cool of itself. It may be objected, that it is not altogether the quenching it in the Water that makes it so brittle, but it proceeds oftentimes from the Mineral, or from its not being well stirred. I do not disagree to this, but there is a Proverb which says, *Ill to Ill can never be good*; this is the Manner of making Iron into Bars.

Of Iron in the Gad, and of Iron Wire.

Iron in the Gad, or *Rod Iron*, is made from Iron in the Bar, which has been heated in a Kind of Furnace, and by Steel Mills cut into the Shape and Figure we see it in. The *Iron Wire* is made of the Rods drawn through little Holes, after the Manner that they make Wax-Candles: They begin with the largest Hole, and finish by the little one, still diminishing the Size of it.

Of Iron Plates, and of Black and White Iron, or Tin, as it is called with us.

The *Iron Plates* are made of Bars heated, and made thin with Hammering. There are two Sorts of Plates, the great and small. They make the *Black Iron* by beating the Plate with smaller Hammers: But besides this, in *Germany* they make a white Iron of which they make several Utensils. This is a soft Iron reduced into thin Plates, and afterwards covered with Tin, in which Operation it is said they use *Aqua fortis*. There is white Iron made at *Nevers*; but that of *Germany* is most esteemed, because it is more white and brighter, and will not rust as the other.

Of Steel.

Steel is only *Iron* purified and made harder, by means of plunging it in cold Water after heating it in Furnaces with the Horns and Hoofs of Animals. The volatile Salts of which are supposed to penetrate the Substance of Iron, and turn it into Steel, which is finer or coarser according to the Number of Times this Operation has been repeated. The finest *Steel*, which is that of *Kernent*, is also supposed in a great Measure to owe its Excellence to certain Drugs with which the Water it is plunged into, is impregnated, as will be related hereafter.

The best *Steel* is that which comes from *Germany*, and is called *Steel of Kernent*, from a Village in *Germany*, called *Kernent*, where the best *Steel* is made. This Sort is called *Steel of a double Mark*, and is used in making such Instruments as are extremely fine; as Lancets, and other Chirurgical Instruments, Razors, Graving Tools, &c. The second sort is that they call *Rose Steel*, because when it is broken there appears something in it like a little Rose, of a Partridge-Eye Colour, and besides, the Casks that they come in are marked with a Rose. This *Steel* is in little Bars, from one Foot to two Feet long, and half an Inch thick. There are likewise several softer Sorts of *Steel* which are but the Refuse of the *Rose Steel*, which some call *Steel of the single Mark*. We have likewise *Steel* from *Hungary*, *Italy*, and *Piedmont*. There are also several Sorts made in *France*, as those of *Vienne*, of *Rive in Dauphine*, or *Clamecy in Auvergn*, and of *St. Disier in Champagne*; it is likewise made at *Nevers*, and at *la Charite*; and this they call *Common Steel*.

But of all the Sorts of *Steel* in *Europe*, there is none that comes near to that of *Kernent* for Goodness,

ness, because amongst the hundred and fifty Iron Mines that the *Germans* are possessed of, there are none so proper for the making fine Steel as those of *Kernent*, and there are, beside, no People but those of that Place, who exactly know the just Quantity of Arsenick, Tar, Orpiment, Sublimate, Antimony, white Copperas, and other Drugs, of which to compose the Water to dip it in: And this, in few Words, is the Reason why no fine Steel is made but in *Germany*, and that many Persons ruin themselves by endeavouring to counterfeit it. As to the tempering of common Steel, they make use of nothing but common Water.

There was formerly a Steel came from *Damascus*, and was very good; and if we will believe Mr. *Furetiere*, the Temper of it was made by the Impressions of the Air, when a Horseman riding full Speed held it in his Hand and brandished it in the Air. He also says, they wetted it by means of a wet Goat-Skin drawing its Edge over it as if they would cut the Skin.

Good Steel ought to be brittle, of a fine Grain, and as white as it can be made. The Chymists make several Preparations of it, of which hereafter. As for the Filings of Steel, they are of Use in Physick, the best are those of Needles; its Proof is by putting it upon a lighted Candle; that which burns by halves, and puts out the Candle, is mixed with the Filings of Iron.

Of the aperitive Saffron of Mars, or the Crocus Martis.

The *Crocus Martis*, which is called aperitive, is a Preparation of Iron or Steel, which is made after three Manners: the *First*, by exposing Plates of Iron to the Dew. The *Second* is by sprinkling the Filings of Iron with Rain Water, or Water mixed with Honey; from whence, after some Time, you shall have a Rust of a brown Colour. These Preparations of *Iron* or *Mars* are very long in making, but very good for the Diseases hereafter mentioned. But as these two Sorts, as I have said, require much Time, and have but a bad Colour, they chuse rather a *third* Way, which is to take a Piece of Steel, and heat it in a Smith's Forge, and then applying to it a Roll of Sulphur, melt it down, and reduce it into a Powder, and so melted, put it into a Crucible, together with more Sulphur, and reduce it by the Fire of a reverberatory Furnace, into a Powder of a beautiful red Colour: Others use the Filing of Iron instead of Steel.

The aperitive *Saffron* of *Mars* is commonly called *Crocus Martis aperitivus*, or *aperiens*, and is an excellent Remedy for the Dropsy, and to

cure the Green-Sickness. The Dose is from ten Grains to forty, in some Electuary, Conserve, or Lozenge, or, as Mr. *Lemery* says, with some Purgatives.

Of the astringent Saffron of Mars.

The astringent *Saffron* of *Mars*, called *Crocus Martis astringens*, is one of the former Preparations of *Mars* washed several Times with Vinegar, and afterwards put into a Crucible, and by a strong Calcination of five or six Hours, reduced to a reddish Powder, but not so beautiful as that above.

The Use of this *Crocus* is to stop Blood when voided, either above or below. It is taken in a like Dose as the former, in Medicines proper for the Malady. The Ancients have given both of these, as well as many other things, the Name of *Crocus*, or *Saffron*, from their reddish Colours.

Of the Salt or Vitriol of Mars.

There are two Sorts of Salt of *Mars* or *Iron*, but the best is that which is made by putting Oil of *Vitriol* and Spirit of Wine in an Iron Pan, and when it has staid there three Weeks or a Month, you will find at the Bottom a greyish Salt, which you must dry, and then preserve it carefully. The other Salt of *Mars* is made by putting the Filings of Steel into distilled Vinegar, proceeding in the same Manner as you would make Salt of *Saturn*, as shall be shewn hereafter. The first Salt of *Mars* is an excellent Remedy against Obstructions. The Dose is from four to twelve Grains in any Liquor proper for the Distemper. As for the Choice of it, the whitest and driest is the best.

Of the Oil of Mars.

Oil of *Mars*, or *Iron*, as it is improperly called, is a Salt of Iron resolved into Liquor in a Cellar. Some People use this Oil as the Salt, with this Difference, that they give it in a larger Dose.

Of the Crystals of Mars.

Crystals of *Mars* are made by putting the Filings of Steel in Water, and putting upon it a good Spirit of *Vitriol*, and by putting it in a Cellar; they draw thence *Crystals* of a greenish Colour; which being dried, are made Use of to the same Purposes as the Salt or the Oil, but they must be given in lesser Quantities, because of their great Acrimony. Some Persons pretend, that by a Retort they can draw a Spirit of *Vitriol* from these *Crys-*

tals: But as this Spirit must be very weak, I would not advise any body to trouble themselves about it.

Of the Tincture, or Syrup of Mars with Tartar.

They draw from the Rust or Filings of Iron, by the Help of *Tartar* and boiling Water, a blackish Tincture; which after having been evaporated and reduced to the Consistence of a *Syrup*, is what they call *Tincture*, or *Syrup of Mars*; others cause almost all the Moisture to evaporate, and so make that which we call the thick *Tincture*, or the Extract of *Mars*.

They attribute to these Tinctures the Property of being very good Aperitives; their Doses are different, for the thicker the Tinctures are, the less of them must be taken; the ordinary Dose is from a Drachm to half an Ounce.

Of the Tincture, or astringent Syrup of Mars.

They likewise draw from the Rust of Iron, with the Lees of Wine, or the Juice of Quinces, or any other astringent Juice, a *Tincture*, *Syrup*, or *Extract*, to which they attribute a binding Quality. The Dose of these Extracts is likewise according to their Thickness, but the common one is from ten Grains to half a Drachm in some astringent Liquor.

Of Mars Diaphoretick.

Mars Diaphoretick is made of the Rust of Iron mixed with an equal Quantity of Sal Armoniack, by a subliming Vessel: they draw thence Flowers which they dissolve in Water, and then precipitate them by pouring upon the Dissolution the Oil of *Tartar per deliquium*. They dry this Powder, which being dried is what they call *Mars Diaphoretick*, altho' the diaphoretick Virtue, which it may have got from the Sal Armoniack is not very great, because it is almost all carried away by the Water.

Iron, in *Latin* called *Ferrum* or *Mars*, *Lemery*. because the Astrologers pretend that this Metal receives Influences from the Planet of that Name, is a Metal very hard, dry, and the most difficult to melt of all others. It is naturally composed of a vitriolick Salt, Sulphur, and Earth, very ill digested, and bound together, which makes it rust so easily. There are several Mines of it in *Europe*, and especially in *France*, in *Champagne*, *Lorraine*, *Normandy*, *Burgundy*, and *Berry*. They take it up sometimes in a *Marcasite*, that is of

the Bigness of Pig Nuts, and of the same Colour, streaked with shining Metalline Veins, sometimes in Sand. They wash this *Marcasite* to get the Dirt from it, then they put it into great Furnaces made on Purpose; they cover it with Charcoal, Flints, and Potters Clay, and by means of a very violent Fire, blown by huge Bellows, they put it into a Fusion; they scum thence a Matter that is as it were vitrified, resembling Enamel; then they let it run into Moulds, for great Wedges, about ten Feet long, and a Foot thick. This is called by the *French*, *Gueuse*, commonly, Sow-Metal. The Rust of Iron, is Iron penetrated and rarified by the Moisture of the Air, which the *Latins* call *Ferrugo*; it is aperitive by Urine, and astringent by the Belly, proper for all Illness caused by Obstructions, and to stop Looseness.

Iron, made red-hot in the Fire, and several Times quenched in Water, renders the Water astringent and proper for Diseases of the Belly. The Waters of a Smith's Forge retaining some saline and vitriolick Particles of the Iron, are astringent by the Belly, and aperitive by Urine.

Steel is Iron rendered more hard, more compact, more fine, and polished, by Calcination and dipping it in Water. To do this, they lay Iron, and the Hoofs of Animals, *Stratum super Stratum*, in a Furnace made on Purpose, near the Mines: they put Fire to it, and when the Metal is softened and almost melted, they dip it in cold Water, that so the Pores which were opened by the Force of the Fire, may immediately be shut up; and they oftentimes repeat the Calcination and the Dipping.

The Hoofs of Animals, burnt in the Fire, produce two Effects: The first is, that they dissipate the most volatile, the most saline, and the most rarified Particles of the Metal. The second is, That a Portion of the volatile Salt which these Hoofs do naturally contain, is introduced into the Pores of the Metal. Now this Salt being rendered an Alkali by the Calcination, it absorbs and destroys the Points of the vitriolick Salt, and the Acid which remained in the Iron; so that the Motion of this Salt being relaxed, the Metal does no longer rarify itself so much, which may contribute to give a good Quality to the Steel; but the principal one that it gains, comes from the Water it is dipt in, which is made on Purpose. They make Steel in many Places of *France*, *Italy*, *Piedmont*, and *Hungary*; but the best is made in *Germany*, at a Town called *Kernent*. Steel ought to be brittle, of a fine Grain, and white.

The Filings of Steel are proper to remove Obstructions, for the Jaundice, and for Diseases of the Spleen. The Dose is from a Scruple to a Drachm.

Water,

Water, in which red-hot Steel has been quenched, called Chalibeate Water, is an Astringent.

It is remarkable, that in Iron there should be two such very differing and opposite Qualities, as of Drying and Moistening, Opening and Obstructing, Astringing and Relaxing. These Qualities are thought to be owing to the mixed Texture of the Body; the relaxing Quality, to the saline and more volatile Part; the Astringent, to the Earthy, and that which is more fixed.

The Salt of Iron is made in the following Manner. Take Oil of Vitriol, or of Sulphur *per Campanum*, two Pounds; Water, two Gallons; mix them well in a well-glazed earthen Jar, by dropping the Oil into the Water, and stirring it well with a wooden Rod; put into this Mixture, of Filings of Iron two Pounds or more, stirring it for half an Hour, then let it settle; decant off the clear Water, filter, and put it into a Frying-Pan, which over a Charcoal Fire evaporate to Driness, and so there will remain a pure white Salt at the Bottom. This Salt cures and opens the worst Obstructions in the Womb or Bowels; it sometimes purges, and may be given to half a Scruple in a Glass of Wine alone, or sweetened with Syrup of Violets.

After the Filings of Iron are turned into Rust, and a Tincture extracted from thence, the *Fæces* are a Kind of *Crocus* made without Fire, which are drying and binding, good against Fluxes, Bloody Flux, Gonorrhœas, Whites in Women, &c. They dry up Ulcers and Wounds, stop all Fluxes of Blood, the Flux of the Terms and Hemorrhoids; they strengthen the Liver, dry up the Water in Dropsies, and running Ulcers in the Legs. Given from a Scruple to half a Drachm, in a proper Vehicle, every Night going to Bed.

The Copperas, or Vitriol of Iron, is made in great Quantities by a cementatory Calcination, then perfected by Dissolution, Evaporation, and Crystallization.

Not only the Salt of Iron, but the Tinctures, are said to open Obstructions of the Reins, cure Ulcers in the Reins and Bladder, help the Cholick, Weakness of Stomach, or Want of Appetite; it gives ease in the Gout, and other Pains of the Joints, both by inward taking, and outward Application.

The Rust or Vitriol of Iron, and mixed with Vinegar, applied, is good against Tetters, Ringworms, Scabs, and running Sores, or Breakings-out, though of many Years Continuance, especially if a little Roch Alum be mixed with it; it also takes away the *St. Anthony's Fire*, or any other lesser Heats and Inflammations.

[No Metal is so necessary for the Uses of Life as Iron, and by the Goodness of the Crea-

tor, none is found so plentifully in almost every Country. It is dug out of the Earth in very different Forms, in some Mines it is found pure, either granulated or in Lumps; in others it is met with in a heavy Stone of a dark yellow or reddish Colour, or in a heavy yellowish or reddish Earth. Some Ores yield the Metal contained in them only by breaking, and a few Hours Fusion, others require a great deal of Labour to separate it, and the Addition of Lime, Marle, or Stones, to facilitate the Fusion.

The specifick Gravity of Iron to that of Gold, is as three to seven, or thereabout; it is dissolvable by all strong Acids, and when exposed to the Focus of a strong Burning-Glass on a Tile presently melts, and then becomes a brittle half vitrified Substance, but if laid on a Piece of Charcoal in the same Focus, it melts and flies all off in Sparkles. It consists of a bituminous inflammable Principle, a vitriolick Salt, and a vitriolick vitrifiable Earth. This Earth united with any inflammable Substance by Fire, will become Iron, which accordingly is seen in burning inflammable Bodies, in the Ashes of which Iron discovers itself to the Magnet, tho' no Signs of Iron are before discoverable in these Substances, even when reduced to the finest Powder.

That the vitriolick Salt is likewise in considerable Quantity, is evident from the Solubility of Iron in simple Water, from the Taste of the Water in which Iron had been in Part dissolved, and from the Heat which Filings of Iron conceive on often sprinkling with Water, which arises from the Action of these Salts on the metallick Earth.

For medicinal Uses Iron is preferable to Steel; the simple Powder of the Filings is by many said to be better in many Cases than any Preparation of it; the Salt, which is also much used, we make by putting warm Water acidulated with Spirit of Vitriol on the Filings of Iron, and after a warm Infusion of twenty-four Hours, filtrating the Liquor and evaporating it to a Pellicle, and setting it in a cool Place, where it yields us a Salt in beautiful green Crystals.]

5. Of Quicksilver.

THAT which we call *Quicksilver*, crude and running Mercury, Hydrargyrie, liquid Silver, the *Proteus* of Nature, the fugitive Salt, or the mineral Spirit, is, according to Mr. *Charas*, a metallick, or mineral Liquor, of a volatile Nature, found in the Mines, and composed, as is believed, of a white sulphureous Earth, and of its own proper internal Mercury. Some Authors, and Mr. *Charas* amongst the rest, say, that Mercury is not to be placed in the Rank of Metals: they have

have given it the Name of a Semi Metal, because it is neither hard nor malleable as the true Metals are, yet it easily unites itself to any other Metal, especially to Gold, to which it often serves as an Intermediate to join it to other Metals. Its Colour of Silver, and the Disposition it has to Motion, is the Reason why they call it *Quicksilver*; from the same Colour, and its Fluidity, it is named *Hydrargyrum*, that is to say, watry Silver, or water Silver. They call it *Mercury* from the Analogy which it is supposed to bear to the Planet of the same Name, or because of the Variety of the Shapes it can take, suitable to what the Heathens represented of that Deity. It is likewise for the same Reason, and the Diversity of Colours that may be given it, that it is named *Proteus*; and from its Fluidity and Volatility, it is called the *Fugitive Salt*.

Quicksilver is found in the Mines after different Manners, sometimes inclosed in its own Mineral, and sometimes as fluid as we see it; and this because it is found so naturally, some have given the Name of *Virgin Mercury*; they find it sometimes amongst Earth and Stones, and very often embodied in a natural Cinnabar, as we shall see hereafter. They who take Quicksilver from its Ore, make use of great Iron Retorts to separate it from its Mineral, or the other hard Bodies with which it is joined, and by the Means of Fire and fresh Water, into which it falls, they render it fluid, so as we commonly have it. The Ore of the Mercury is so like Antimony of *Poitou*, that if it were not for the Rays or Streaks, which are somewhat whiter, there is no Body that could find the Difference; when it is found running or liquid in the Ground, the Slaves who take it up have nothing to do but make it run through *Chamois* Leather to cleanse it from its Impurities. There are but few Places in *Europe* from whence they take Quicksilver, which are *Hungary* and *Spain*, and the Mines of *Frioli* which belong to the *Venetians*. The Quicksilver Mines are so deep, that I have been informed it is a Work of five Hours to descend into them. The *Frioli* Quicksilver is brought into *France* by Way of *Marseilles*, that of *Hungary* is carried to *Vienna* in *Austria*, and from thence to *Holland*, from whence we have it. That of *Spain* is transported to *Peru*, to serve to purify their Gold and Silver, as I have observed before. The *Spanish* Quicksilver was once common enough in *France*; this Quicksilver being put upon Silver a little heated, had the Property of gilding the Superficies, and of giving the Silver a very fine Gold Colour; this rich Quality, according to some Alchymists, which in Reality is nothing, and the Difficulty there is of having it at present, because

the King of *Spain* has expressly prohibited the Transportation of it into other Countries, has made it so scarce as it is at present, as well as the natural Cinnabar. Some modern Authors have said, that there is Quicksilver found in the *Indies*, *Poland*, *Germany*, and even in *France*; which perhaps may be true: But notwithstanding all the Pains I have taken, I could never discover the Truth of it. It is true indeed, that a Mine of Cinnabar was lately found in *Normandy*, between *St. Lo* and *Charenton*, near a Place called *Le Fesse Rouge*; but the great Charges of it obliged them to stop it up again. It is an Observation of Mr. *Lemery's*, that Quicksilver is usually found under Mountains covered with white Stones, which are as brittle as Chalk. The Plants which grow upon these Mountains seem greener and larger than elsewhere, but the Trees which are near the Quicksilver Mine, rarely produce Fruits or Flowers, and their Leaves come out later than in other Places.

One of the Signs that discover a Mine of Quicksilver, is when in the Month of *April* or *May* there come thick Mists or Vapours out of one particular Place, which cannot rise far in the Air because of their Weight: It is to such a Place that they go to look for this Metal, and especially if by chance it is situated opposite to the North Wind, for then they think the Mine will prove the best. They likewise find a great deal of Water about these Mines, which it is necessary to draw off at the Foot of the Mountain, before you can come to work them.

Chuse such Quicksilver as is white, running, clean, of a lively and beautiful Water, and reject that, which being put into any Copper Vessels, such as Scales of a Balance, or others, appears like Lead; that is to say, when its Colour is brown, and it leaves Tails or Trains behind it, as if it were roapy, or sticks to the Hands when you handle it; which is of no small Consequence, because the greatest Part of the Quicksilver that is consumed, is made Use of by Looking-glass-Makers, Goldsmiths, Burnishers, Gilders, and others; and if by Mischance or Roguery, in such a Parcel of Quicksilver, as is used at one boiling, there should be one Pound of Lead, it would spoil all their Works.

Besides the Qualities before-mentioned, which ought to be in Quicksilver, one may prove it by putting a little of it in a Silver Spoon, and letting it evaporate over the Fire; if there remains a yellow Spot, it is a Mark that it is natural; if it leaves a black one, it is a Sign that it is mixed with Lead or Tin. Quicksilver is a Matter so very weighty, that Mr. *De Furetiere* says, that a solid Foot of Mercury weighs nine hundred forty seven Pound, and that a cubical Foot of the *Seine* Water

Water weighs but seventy Pound; that is to say, a Vessel which will hold thirty five Pints of the Water of the River *Seine*, according to the *Paris* Measure, will contain nine hundred forty seven Pounds of Quicksilver. As *Quicksilver* is so extremely weighty, so it is no less strong; since a fifty Pound Weight of Iron being put upon a Bouillon of Quicksilver, which, as it comes from *Holland*, is generally a hundred and threescore or fourscore Pounds, it shall no more sink in it than if it were an Ounce, which I could never have believed, unless I myself had seen it. As to the Properties of Quicksilver, they are so great, that they exceed Imagination; some Persons pretend, that a Drachm Weight of Quicksilver has the same Effect as any greater Quantity whatever; and that if they prescribe it in large Doses, as they do sometimes, especially in the *Miserere*, or Twisting of the Guts, it is only that it may pass the faster, and disentangle the Bowels. It is likewise a surprising thing, that into whatsoever Shape you metamorphose Mercury, you may make it return to its first State of Nature, and that with a very small Diminution. *Borrichius*, a *Danish* Chymist, says, in his Book of Chymistry, that having operated upon some Mercury for a Twelvemonth together, and having reduced it into several Forms, it took its own Shape again in the Fire, at last, by the Means of a little Salt of Tartar. The great Consumption of Quicksilver, especially in *France*, is the Reason why the *Dutch* have raised it two *Stivers* of their Money in the Pound, which is three *Sous*, or three Pence of ours. And since they have, for a long Time, engrossed that Merchandize, it is not sold there under six and thirty *Sous* the Pound. I shall not here recount the several Virtues that are attributed to this Metal, because several Authors have treated of them, nor decide the Controversy, whether it be cold or hot; but I must say this, that it is so cold, externally, that it is impossible to hold one's Hand in a Quantity of Quicksilver for the Space of a Quarter of an Hour. It is wrong to think, as some modern Authors have written, that the *Dutch* turn Mercury into Cinnabar, to transport it into other Places, and that for these three following Reasons: *First*, Because Quicksilver is easily transported in Sheep Skins, put into Barrels, and filled up with Straw or Shavings. The *second* is, that if we were obliged to revive Cinnabar into Mercury, we could not afford it at the Price we do: And all the Mercury that is reduced in *Holland* into Cinnabar, is used in *France* and other Places as Cinnabar, at least there are only some very curious People, who resolve to have their Mercury pure and neat, who give themselves the Trouble to revive it. In the *third* Place, when

the *Dutch* have a Mind to make their Quicksilver portable, they fix it very easily, and put it into all sorts of Vessels, even into Paper, and send it to them who have the Secret to make it run again without any Charges.

Quicksilver, called in *Latin* *Hydrargyrus*, *Mercurius*, *Argentum Vivum*, and by the Chymists *Azock*, is a Metal, or Semi Metal, fluid, running, of the Colour of Silver, very weighty, and yet volatile, penetrating, uniting, and amalgamating itself with Gold and Silver. It is found in several Mines in *Europe*, as in *Hungary*, and in *Spain*; and there is one Mine discovered about forty Years since in *Normandy*.

As Mercury is a very fluid Body, so it is more difficult to be taken up than other Metals, for it insinuates itself into Earths, and into the Clefts of Stones, so that you often lose the Sight of it when you think you are just going to take it up. People are forced to go very deep in the Ground to find it, and the Men cannot work very many Years at it before they have the Palsy; so that few are employed in it but Criminals condemned to Punishment.

The Quicksilver is not always taken out of the Mine neat and running, but it is generally mixed with Earth, or reduced into a natural Cinnabar by some Portion of Sulphur that it had met with. That which has but a little Earth with it may be separated by making it pass through Leather; but when it has a great deal of Earth, or other Impurities, it must be put into Iron Retorts placed upon a Furnace, to which they fit a Recipient full of Water, and blow the Fire under the Retort till it becomes fierce, and makes the Mercury distil into the Water. Iron Retorts are the most preferable on this Occasion, because the Quicksilver endeavouring to get to this Metal, separates itself the more willingly from the Earth, and is the more disposed to be rarified and pushed on by the Fire.

One is not always assured of the Purity of the Mercury that is sold by the Merchant, for it may be vitiated by some Mixture which was made in the Mine, and could not be separated by the Leather; or by the Addition of Lead, or some other Metal or Mineral, that the Sophisticians may have put into it: it is therefore necessary to purify it before you use it.

The Method of the Ancients to purify their Mercury, and, as they said, at the same Time to correct its cold Quality, which they said it had in the fourth Degree, was by mixing it in a Stone Mortar, with Salt and Sage in Powder, and beating this Mixture for an Hour together with a wooden Pestle, and afterwards straining it through a Skin;

by this Means they rendered it clear and beautiful: But they had only taken off a superficial Impurity which was of no Consequence, which the Quicksilver by rolling about contracted in the Vessels of Leather or Earth it was kept or transported in: If there were any Metal or metallick Matter in the Quicksilver, it would pass with it through the Pores of the Skin, and that could make no Separation of it; as for the pretended cold Quality of the Mercury, that could not be corrected by this Preparation, and in short the Metal continued in much the same Condition as before.

The sure Means of having Quicksilver as pure as it is possible, is to revive it from Cinnabar after the following Manner:

Mix together two equal Parts of Powder of Cinnabar, and Filings of Iron, and fill about a half, or two thirds of a Retort with them, place it on a reverberating Furnace, and fit to it a Glass Recipient full of Water, without luting the Joints; encrease the Fire to the fourth Degree, you will find the Quicksilver distil and fall to the Bottom of the Recipient; keep it on the Fire till no more will rise, and you will have got thirteen Ounces of running Mercury, from one Pound of Cinnabar; wash it, and having dried it with Linen Cloths, strain it through Leather. We may be secure that this Mercury is pure, because if any Portion of Metal or Mineral had been mixed in the Mine with the Quicksilver, of which the Cinnabar was made, it would have remained at the Bottom of the Vessel, and would not have been able to rise with the Mercury and the Sulphur; and if after the Sublimation any strange Body had been mingled with the Cinnabar, this Impurity, of what Nature soever, would be separated by the Revivification or Distillation that I have been speaking of. The Recipient must be filled with Water, that the Mercury which ascends in a Vapour from the Retort, may by the Coldness thereof, be condensed into a Liquor; but the joining of the Recipient with the Retort, must not be luted, because that in the Distillation there always arises a great Quantity of Sulphur from the Cinnabar, which would mix itself with the Mercury, if it could not find a Place to get out at, and would reduce it to a Sort of grey Paste, so that it would be necessary to distil it a second Time.

The Iron, upon this Occasion, serve as an Alkali to separate the Acids of the Sulphur, which held the Mercury in the Cinnabar; and this Mercury being disengaged from its Bonds, comes into a Condition of being rarified and pushed on by the Fire. Quick Lime produces the same Effect as the Iron, but then there must be thrice the Quantity.

The Fluidity of the Mercury proceeds from this, that the insensible Particles, of which it is naturally composed, are all spherical or round; for their Figure rendering them incapable of hooking one into the other, they roll about continually. The same Reason explains why this Metal, though it be so heavy, should easily be volatilized by the Fire; for its round Parts being always disunited, and having no Tie of one to the other, are all severally light, and in a proper Condition to be pushed forward, and elevated by the Fire. That which makes the Solidity and Firmness of other Metals is, that their insensible Particles having divers Figures, are so hooked, bound, and exactly united one to the other, that the Fire has no Power to separate them, so as to let them be elevated.

Quicksilver is a Remedy for the *Miserere*, in which the Patient swallows a Pound or more: It is voided by Stool, without any Alteration.

They use crude Mercury to kill the Worms, they boil it in Water, and then give the Patient the Decoction to drink, which must have taken but a very small Impression let it have boiled never so long; for the Metal is found to be of the same Weight, and the Decoction has no other Colour, Taste, or Smell than common boiling Water; and yet it does not fail of producing a good Effect. Care must be taken that the Vessel in which the Mercury is boiled be of Earth or Glass, and not of Metal, because the Quicksilver would penetrate it. Mercury kills Lice and other Insects that infect the Body; it cures the Itch, Tettors, and venereal Distempers. It resolves and dissipates hard Tumours in the Glands and other Parts. It removes Obstructions, applied outwardly or taken inwardly. It is used in the Composition of several Unguents and Plaisters. It is one of the best Remedies in Physick, to dissipate and eradicate the grossest, most foul, malignant, and inveterate Humours.

One of the most surprising Effects that Mercury produces, is to raise a Salivation, and so carry off the very *Radix* or Root of the Distemper in all venereal Foulnesses. To explain this, it must be considered, that the venereal *Virus* consists in a Humour that is salt or acid, tartarous and gross; which fermenting by Degrees, corrupts the Blood and other Humours, and causes all the ill Accidents that follow it.

The Particles of Mercury which enter into the Body, either by Frictions of mercurial Ointments, or by the Mouth, being rarified, are distributed as a Fume, and apply themselves particularly to the *Virus*, because this acid Matter is more capable of uniting with them than any other Substance. They penetrate the Venom, and are penetrated by

by its acid Salt, almost in the same Manner as it happens in the Mixture that is made when one would prepare the corrosive Sublimate. The Heat and the Circulation of Humours soon make this Mixture of Mercury and Acid elevate and sublime itself to the Brain, as the Fire elevates the corrosive Sublimate in a Matrafs, upon which the Head, the Gums, the Palate, and the Tongue, are ulcerated; the salivary Vessels are relaxed; and there are the same Pains as if the corrosive Sublimate was put upon some Part that was excoriated. These Accidents are accompanied by a copious and involuntary Salivation, which is maintained by the Acrimony of the Humours that descend from the Brain, and the Relaxation of all the salivary Vessels. This Flux continues till all the acrid, virulent, and mercurial Humours are evacuated.

Since there is nothing able to subdue these venereal Distempers so speedily, safely, and effectually as Mercury, it will be necessary to see the several Ways, by which it may be prepared as well for external as internal Uses.

An Ointment, called the Neapolitan Ointment, is prepared after the following Manner for external Uses.

Take of Quicksilver, cleansed and strained through Leather, three Ounces; kill it in a marble or wooden Mortar, with a sufficient Quantity of the Oil of Turpentine, adding of Hogs-Lard, six Ounces; beat the Mercury and the Lard well together, until the Quicksilver disappear, and make an Ointment to raise a Salivation after the following Manner:

First bleed the Patient once or twice, or oftner, if you see Occasion for it; then purge him according to the Strength and natural Constitution of his Body, making use of a Bath, half Bath, and Broths, with proper and suitable Herbs, so as to render the Humours more fluid, and fitting to rise upon a Salivation, taking Care that the Salivation be raised, carried on, and promoted leisurely and gradually; for in this respect most of our old Surgeons have erred, and not a few of our late Surgeons do still err, in raising a Salivation too hastily, and to such a Height, that the Mouth, Tongue, and Tonsils are frequently seized with a Gangrene; wherefore a Salivation ought to be raised by Degrees, and the Mouth often looked into, so as that the Signs of an approaching Salivation may be duly and clearly discerned: Wherefore placing the Patient before a good and clear Fire, being first covered with Clothes suitable to his Distemper, begin the Friction at first with half an Ounce of *Neapolitan Ointment*, anointing him from the Soles of his Feet to the Calves of

his Legs. Upon the second Night use about two Ounces more of the same Ointment, in anointing him from the Calves of his Legs to his Knees: And upon the third Day let him rest, especially if you perceive the Signs of an approaching Salivation, that is, an extraordinary Heat and Dryness of the Mouth, a Swelling of the Gums and Salivary Glands, attended with a frequent Spitting. Upon the fourth Day, having searched the Mouth to try whether the Orifices of the Excretory Vessels be seized with an Inflammation, or small Ulcers, another Friction is to be performed with two or three Ounces of the Ointment, anointing from the Knees to the Middle of the Thighs; and upon the fifth Day the Patient is to rest again, abstaining from the Use of the Ointment, especially if you observe the Ulcers to enlarge, and a laudable Salivation to come on; but this depends upon the Nature of the Distemper, and the Strength of the Patient; for some require but four Frictions, others more; and nothing is more to be feared and avoided than too high a Salivation: If a fourth Friction be required, it is to be performed with two or three Ounces of the Ointment, anointing from the Middle of the Thighs to the Loins, Hips, and privy Members; and if a Friction should happen to be required a fifth Time, you are to anoint the Hips and privy Members over again, extending to the Arms, and all the upper Parts of the Body, except the Head, Neck, and Breast.

If the Tonsils should happen to be seized with a Gangrene, by Means of too high a Salivation, then having taken away some Quantity of Blood, you must instantly have Recourse to Purgation, than which there is nothing more effectual; and it is to be frequently repeated, if necessary, and the Clothes wherewith the Patient was covered, during the Time of the Friction, must be taken off. Such a Salivation is approved of, whereby about two or three Pints of a viscous or glutinous Humour are discharged every Day, and which is fully accomplished in the Space of twenty or twenty-five Days, or a Month at farthest. After the Salivation is over, the Patient is to be exposed to the Air, and refreshed and recruited by the Help of a Bath, Broths, and Foods of a good Nourishment; or else he must make use of a Diet-Drink made of the sudorifick Woods and Roots for some Time after.

Some raise a Salivation by Emplastration, making use of the Plaister of *Vigo*, otherwise called the Plaister of Frogs, with a fourfold Quantity of Mercury. Others raise it with the Fumes of Cinnabar; and this is called Fumigation, which is a very good Way, especially for such as are troubled with Warts, Chaps, and Swellings about the Fundament.

Salivation

Salivation is also raised by the Help of crude Mercury taken at the Mouth.

Take of crude Mercury an Ounce, well cleaned and killed with *Venice Turpentine*; of the Conserve of red Roses, half an Ounce; of red Coral prepared, half an Ounce; of which take from half a Drachm to one or two Drachms, till such Time as a due Salivation rises.

The most common Preparations of Mercury for the venereal Distemper, are these which follow: Sweet Sublimate, or *Mercurius Dulcis*, or the white Eagle; the mercurial *Panacea*, Turbith Mineral, Mercury Precipitate, white, red, and green, &c. for Mercury, like *Proteus*, can be changed into several different Shapes and Colours, but by the Force of Fire it still returns again to its own Nature, which the Chymists call Reviving.

Sweet Sublimate is thus prepared: Take of Sublimate Corrosive Mercury, and of crude Mercury, of each what Quantity you please; mix them well together, and put them in a Glass Body, to the Height of one Finger, or two; then sublime them with a slow Fire gradually, and separating the Sublimate from its Dregs, powder it over again, and sublime it three or four Times over, mixing it well; and this is called *Sweet Mercury*, or the *White Eagle*.

The *Panacea* of Mercury is made by subliming of Mercury ten or twelve Times over. This *Panacea* will sooner raise a Salivation than sweet Mercury, which is sometimes apt to purge downwards. They are both of them prescribed from ten Grains to half a Drachm.

Take of Sweet Mercury twelve Grains, powder it, and make it up into a *Bolus*, with a sufficient Quantity of the Conserve of Roses, or the Mucilage of Gum Tragacanth, to be given at nine o'Clock at Night, giving the next Night fifteen Grains, and the third Night twenty, till the Salivation be duly raised.

The *Panacea* of Mercury is to be used after the same Manner, by encreasing the Dose of it gradually, according to what Height you have a Mind to raise the Salivation.

A great many use to prescribe sweet Mercury one Day, and a purging Potion upon the other Day, endeavouring by that means to cure the venereal Distemper without Salivation; or else they mix sweet Mercury with Purgatives, and give it in Pills, Bolus's, or Electuaries.

Take of sweet Mercury and *Diagrydium* of each a Drachm; of Lozenges of *Coloquintida* a Scruple; powder them, and with a convenient Quantity of *Venice Turpentine*, make a Mass of Pills for five Doses.

White precipitate Mercury is thus prepared: Take of Mercury well cleaned and strained four Ounces; dissolve it in a large Matrafs or Cucurbit, with three Ounces of Spirit of Nitre; adding to the Solution, of fair Water two Pounds; and pour again upon this last Solution, of salt Water two Pounds; and then the Mercury will, by little and little, precipitate or fall to the Bottom in the Form of a white Powder, which is to be sweetened by often washing, drying, and burning, or kindling Spirit of Wine upon it. The Dose of the Powder inwardly, is from four Grains to half a Scruple.

But outwardly it cures the Scab, and other cutaneous Distempers, being used after the following Manner: Take of white Precipitate one Drachm; of the Ointment of Roses one Ounce; mix, and make an Ointment.

Yellow Precipitate, or Turbith Mineral, is thus prepared: Take of crude Mercury four Ounces; pour upon it of Spirit of Vitriol or Sulphur one Pound; put this Solution into a Retort, with a large Receiver, set it upon a slow Fire, and draw off all the Liquor, until it is dry, and so the white Mass will be obtained, which is to be powdered and dissolved in boiling Water, and then the Mercury will gradually precipitate in the Form of a yellow Powder, which is to be sweetened by washing, and burning upon it Spirit of Wine. This Powder is to be given from three Grains to four or six. It purges vehemently, both upwards and downwards, but it safely and speedily cures the *French Pox*.

The *Arcanum Corallinum*, the Coralline Secret, or the Dragon devouring itself, called also *Lampandra*, is, without any Addition, performed in the Space of two Months, by digesting Quicksilver in an earthen Pot with a long Neck, by the Help of a Lamp; for the Mercury is by that Means changed into a bright red Powder, to be given from four Grains to six or eight, provided it be first sweetened by burning Spirit of Wine upon it, otherwise it often provokes Vomiting.

[Quicksilver is sometimes found fluid in the Earth, but commonly in Glebes, or in Form of a red sulphureous mercurial Mineral, called *Cinnabar*, or of a stony Glebe, sometimes red, sometimes yellowish, sometimes dark, and sometimes of a Lead Colour. It is extracted from these Glebes, sometimes by the Retort, but oftener and more expeditiously by a kind of Distillation *per decensum*; the Miners beat it small and put it into narrow necked earthen Vessels stopped with Moss; other such Vessels, only with wider Mouths, are buried in the Ground, and the Necks of the first are put into these others: in this Position their

their Necks are firmly cemented together, the lower Vessels being wholly under Ground, and the upper, which contain the Quicksilver Glebe, and are inverted, wholly above Ground. An Area of a sufficient Extent being filled with those double Vessels, a Fire is lighted round them, by means of which the Quicksilver drains thro' the Mofs into the lower Vessels. They afterwards dig them up and put the Quicksilver into Bottles.

The Mines in *Hungary*, *Carinthia*, and *Friuli*, are very rich. When the Cinnabar contains a great Proportion of Sulphur, the Quicksilver cannot be extracted without something to absorb the Sulphur, and set the Quicksilver at Liberty and render it fluid, as the Addition of Pot-ashes, Lime, Filings of Iron, or the like.

Quicksilver is the heaviest of all Metals next to Gold, which is to Mercury in specifick Gravity nearly as four to three, and therefore sinks in it, whereas all other Metals swim on it; it may be amalgamated with all other Metals and metallick Substances, but most difficultly with Iron, Copper, and Antimony; it penetrates Metals, and dissolves or makes them brittle, it readily unites with Sea-Salt, but not so easily with Nitre or Vitriol, it easily is dissolved in Spirit of Nitre but more difficultly in Oil of Vitriol. It is very difficult to analyse Quicksilver, because as soon as any considerable Degree of Fire is applied to it, it flies off, but by a very gentle Heat, does in Time change it into a greyish Powder, which afterwards turns yellowish, and lastly red. Exposed to the Focus of a strong Burning-glass, it presently evaporates in Fumes without leaving any Remainder, but if the Calx before mentioned, be laid before the Burning-glass on a Tile, it first melts into a Substance like Glass, and then speedily evaporates, leaving a little of a brownish Powder behind, which afterwards vitrifies; if it be laid on a Piece of Charcoal it melts into Glass, then runs on the Coal, and becomes again pure Quicksilver before it evaporates: Hence it seems evident, that Quicksilver consists of a volatile vitrifiable Earth and Sulphur, to which it owes its Splendor and Fluidity, for when deprived of its Sulphur by Calcination, it loses both its Colour and Fluidity, but if these Particles of Sulphur be again restored to it, it recovers both again. Quicksilver was by the Antients reckoned a Poison, *Dioscorides* ascribes pernicious Effects to it, and *Galen* from his Authority reckoned it highly corrosive, for he says, he never tried it himself; the Name of it is not to be found in *Hippocrates*, whence it is to be supposed it was not in use in his Time. It is but about two hundred Years ago, that it got into Practice generally, and that from an Observation, that Shepherds gave it to their Cattle

with Safety for the Worms. *Jacobus Carpenfis*,^a Physician of *Bologna*, was the first who cured venereal Diseases with it.]

6. Of the mineral or natural Cinnabar, and likewise of the artificial Cinnabar.

THE mineral *Cinnabar* is a red Stone, *Pomet.* heavy and shining, which is found in many Places of the World, but the best and most esteemed comes from *Spain*. I have taken a great deal of Pains to find the true Name of the Place where *Cinnabar* is found; a worthy Person has assured me, that he himself had seen and gathered it, and that the best was that of *Andulasia*, upon the Lands of the Fathers of *St. Jerome*, and that it was there as common as Free-stone is with us. But Mr. *Charas* has informed me, that the great Mines of *Cinnabar* lie in the Mountains of *Sierra Morena*, and that the King of *Spain* maintains a great many Workmen there at his own Expence and Charges, to get the Mercury thence and send it to *Peru*. And as this Relation seems to me to be most probable, I take it for certain, that the large Quantity of *Spanish Cinnabar* that we had heretofore, and the smaller we have had lately, came from the Mountains of *Sierra Morena*; and the Cheapness of it, at one Time, sufficiently shew us that it was not difficult or expensive to take it out of the Mines, which may in some Measure favour the Sentiments of that Person who told me that it was found as commonly as Stones, and that it cost nothing but the gathering.

The natural *Cinnabar* is to be chosen of a high Colour, the most shining, and with as little Stone as possible; but since the true *Spanish Cinnabar* is become so scarce in *France*, there are so many Sorts of the other, that it is difficult to describe them all, tho' nothing is at present more common, than to ask for the right *Spanish Cinnabar*; they who sell it, make no Scruple of giving one for the other, and so put off for it that of *St. Lo*, tho' very different, because that of *Spain* is of a bright red Colour, and that of *St. Lo* of a dull one, and is less abounding in Mercury; some Persons indeed, on the contrary to this, which is the generally received Opinion, have maintained, that that of *St. Lo* would yield fourteen Ounces of Mercury out of the Pound, as well as that of *Spain*, which I cannot contradict, because I never tried it.

The mineral *Cinnabar* of *Spain*, though much demanded, has no other Property, that I know of, but that of yielding a pure Quicksilver, with which Alchymists make Vermillion, and pretend that

that they can make even Gold itself, by fixing it, and giving it a Tincture; for in respect of the Weight, it comes very near the true Gold. Mr. *Lemery* says, the natural *Cinnabar* is a Mixture of Mercury and Sulphur, which are sublimed together by a subterraneous Heat, which is done by Nature almost after the same Manner as we make the artificial *Cinnabar*.

Mr. *Furctiere* has remarked, in his Book, that there is a mineral *Cinnabar*, which is a very red Stone, heavy, and not hard, resembling the *Hæmatitis*, which contains Quicksilver, which drops from it of itself, without the Help of Fire. He says it is found about *Carniola*, and that it is the *Minium* of the Antients, and is a Poison. He says also the Word *Cinnabar* comes from the Greek Word *Kinabra*, which signifies the Smell of Goats, which is an insupportable Smell; because when they dig a Kind of Fossil *Cinnabar* out of the Ground, according to *Matthioli*, it casts so rank and strange a Smell, that they are forced to stop their Nose and Mouth, for fear of being suffocated by it. I should not have spoke of this latter *Cinnabar*, but that I look upon it to be a Falsity, and to dissuade them who would believe that there is natural *Cinnabar*, from which the Mercury flows naturally.

There are so many Kinds of natural *Cinnabar*, that it would be difficult to name them all, but those of *Carinthia*, *Armenia*, *St. Christophers*, &c. are all much inferior to that of *Spain*.

The artificial *Cinnabar* in the Stone, is a Mixture of Mercury and Sulphur sublimed and reduced to a Stone, in the Manner we see it. It should be chosen in fair Striæ, and the highest in Colour that can be had.

The Use of *Cinnabar* is, as I have said, to draw thence a Mercury, for those who would have it clean and neat, as well to make the mercurial *Panacea*, as for other Operations where Mercury revived from *Cinnabar* is necessary.

Cinnabar in Stone is also of Use to Painters, after it is ground, because it is of a more lively red than that which comes ready ground from *Holland*; but that which is troublesome in it, is, that it dries very difficultly. It is likewise of some Use in Physick, as well in Fumigations, as other Forms, both inwardly and outwardly; tho' *Cinnabar* is seldom used inwardly but for Horfes, to make a Composition, called the *Cinnabar* Balls.

All the *Cinnabar* we have, both whole and ground, comes from *Holland*. And it is a surprising Thing, that they who make it, do it in Cakes of three or four hundred Weight, which they do easily, by putting into the Vessel twenty-five Pounds of the Materials, that is to say, of the Sulphur and Mercury together; and when they are sub-

limed, putting twenty-five Pounds more, and continuing after the same manner, till the Vessel is full; and this is the Reason why the *Cinnabar* we see is disposed in several *Strata*.

As for Vermillion, it is *Cinnabar* ground with Urine or *Aqua Vitæ*, or common, or Sea Water, after it is dried, transported to different Places.

There are two Sorts of Vermillion brought from *Holland*, the red and the pale, which happens according as they are more or less ground; for the more it is ground, it is the finer, but the paler is most used by those who use it in making Sealing-Wax.

That Vermillion is to be made choice of that is well ground, dry, the least earthy, and the most pure and clean that may be. It is certain that the *Dutch*, when they grind their Vermillion, mix it with red Lead, or some other drying Drugs, because *Cinnabar*, when ground here, is difficult to dry, whereas it is otherwise in that which comes to us ready ground.

Vermillion is much used in *France* by them who make Sealing-Wax, Painters, and other Workmen. But Care must be taken not to use *Cinnabar* ground, and mixed with any fat Substance, to paint the Face; because, as Mr. *Lemery* has well remarked, there is a great deal of Danger in it; and ill Accidents may attend it; the *Spanish* Wool may be used instead of it with Safety, as being made of nothing but *Safranum* of the *Levant*.

They draw from *Cinnabar*, or Vermillion, by the Help of Fire, and the Filings of Steel, or Quick-Lime put into a Retort, a Quicksilver that is very pure, and proper for all Uses where Quicksilver is requisite; but as it is very dear, because of the Expence, every body, except they be very curious, make use of that of *Holland*. This Mercury ought to be extremely white and lively.

Cinnabar is a mineral Matter, solid, hard, weighty, bright, crystalline, of a *Lemery*. very red Colour, distinguished with Streaks, shining and sparkling like Silver, composed of a Sulphur, and Quicksilver, and a little Earth. That which is impure, and of a yellowish Colour, mixed with a stony Matter, is to be rejected, as not being the true kind of *Cinnabar*, but rather a kind of *Auripigmentum*, or Orpiment.

There are two Sorts, one natural, called mineral *Cinnabar*, the other artificial, called simple *Cinnabar*. The natural is found formed in Stones that are red, shining, and weighty, in the Quicksilver Mines of *Spain*, *Hungary*, *Germany*, *France*, and other Parts: That of *Spain* is accounted the best. That which is most weighty, clean, red, and shining, is to be preferred, because the higher its Colour, the more Quicksilver it contains. The natural

natural *Cinnabar* has been sublimed by the subterraneous Fires, almost in the same manner as the artificial *Cinnabar*; but as in its Sublimation it is mixed with the Earth it meets with, it is not so weighty, pure, nor beautiful as the artificial, and contains less Mercury.

The artificial *Cinnabar* is made with three Parts of crude Mercury, and one Part of Sulphur, mixed and put into subliming Vessels over a gradual Fire. It ought to be made choice of in fair Stones, very weighty, bright, with long, clear, and fine Points, of a brownish red Colour. Each Pound of *Cinnabar* has fourteen Ounces of Mercury to two Ounces of Sulphur. Artificial *Cinnabar* being ground upon a Porphyry, is reduced to the finest Powder, of a most beautiful red Colour, made use of by Painters, and those who make Sealing-Wax.

These *Cinnabars* are made use of in Epilepsies and Asthma's; to take inwardly from two Grains to half a Scruple.

Take of native *Cinnabar* six Grains; of the Conserve of Lime-tree Flowers one Drachm. Make a *Bolus* to be given in the Falling-Sickness.

It is to be observed, that native *Cinnabar*, though it has been used and tried by a great many, will not raise a Salivation; whereas the other Kind of *Cinnabar* will do it speedily and easily, which truly ought to be attributed to the large Quantity of Earth, with which natural *Cinnabar* abounds, that restrains it from subliming or rising high enough for that Purpose.

If native *Cinnabar* be required to be made use of in Distempers of the Brain, and be not to be had, the *Cinnabar* of Antimony ought to be employed instead of it, rather than the fictitious or artificial *Cinnabar*; for this is more properly used in venereal Distempers, and chiefly by way of Fumigation.

Some chuse the *Cinnabar* of Hungary, as being the most solid and heavy, replenished with the best Sulphur and Mercury.

Native *Cinnabar* being ground into an impalpable Powder, is almost an universal Medicine, and may be given from ten to thirty or forty Grains, or a Drachm, in any convenient Vehicle, for forty, fifty, or sixty Days together, taking it always at Bed-time. It may be taken two Days together, and sometimes three, the next Day purging after it, and so to continue till thirty, or even fifty or more Doses are taken.

It is an excellent Antivenereal; and being taken inwardly, expels the Pox, and all its Foulness out of the whole Body, and all its Juices. It sweetens the Blood, takes away all manner of Pains and Aches in any Part; all manner of Swellings, Ulcers, and nocturnal Pains; kills Worms in Young and Old; is a Specifick for the Falling-Sickness,

as said before, and is excellent for Vertigoes, Apoplexies, Palsies, Lethargies, and all Diseases of the Head and Brain.

The artificial *Cinnabar* is thus made: Take common Sulphur, in Powder, four Ounces; melt it in an earthen Pan upon Coals; add to it a Pound of Quicksilver; stir them continually with an Iron *Spatula*, till they are united in a black Powder, and the Mercury ceases to appear; being cold, grind it in an Iron Mortar to a subtile Powder; put this Powder into a Glass Retort well luted, and distil with a naked Fire; first with a gentle Heat, then with a stronger; then in a few Hours the Mercury and Sulphur will sublime into the Neck of the Retort, the whole appearing of a greyish Red, or a dark Red Colour; beat it into a fine Powder, sublime it again, and you have a most pure red Vermillion. It has all the Virtues of the former: But Physicians have not given it inwardly so much as the former, though it be full as safe.

[*Cinnabar* was a Name given by the Antients to several different Substances, and in the Time of *Dioscorides* to a red astringent Drug brought from Africa, and supposed to be the Blood of Dragons, which was in all Probability what we call *Sanguis Draconis* at this Time; the same Name was also given to the *Minium* of the Antients, which they described to be a Mineral Substance of a red Colour, from which Quicksilver was extracted, and in after Times the Words *Minium* and *Cinnabar* were indifferently used, to signify the same thing: The true *Minium* afterwards becoming scarce, they frequently adulterated it with Lead Ore calcined to a Redness, and that calcined Substance came to be called *Minium*, and the Word *Cinnabar* became appropriated to the genuine Mineral from which Quicksilver might be extracted. And in this Sense of the Words, whatever the Antients have said of *Minium* and *Cinnabar* may be understood without Confusion.

The native or fossile *Cinnabar*, is therefore the *Minium* of *Dioscorides*; *Cinnabaris*, *Mathioli*. 1355. *Lapis Minium*, *Aldr. Mus. Mel.* 627. *Minium purum seu Cinnabaris nativa*, *Worm.* 126. It is properly Quicksilver Ore: It is found sometimes pure, and sometimes mixed with Stones. Of the pure *Cinnabar* there are several Kinds, one of a purplish red, which by powdering, is brought to a most beautiful clear red, another of a dusky Colour resembling the *Lapis Hæmatitites*, and a third of a yellowish Colour, which is commonly so rich in Quicksilver, that when heated in a very small Degree, it drops spontaneously from it; another Kind is found in a fossile Stone formed of various Laminæ of an Ash-Colour, and it has sometimes been found in a whitish Stone of a metalline Texture,

Texture, and sometimes in form of a Gold and Silver *Pyrites*, such as was dug up some Years ago, in several Parts of *Normandy*. It is also found in *Hungary, Bohemia, Italy, Spain, and France*. The Painters of old were extremely fond of it, but they seldom use it now, because the factitious Sort is cheaper, and answers all their Purposes as well. It is also given internally in Epilepsies, Vertigoes, Madness, and all spasmodick Affections; that of *Hungary* or *Carinthia* is to be chosen for this Purpose, and that which is of a sparkling shining Red, and free from all heterogeneous Particles; the yellowish Kind, though containing more Quick-silver, is to be rejected as being more impure. Sometimes, however, the best chosen native *Cinnabar* by means of vitriolick, or perhaps even arsenical Particles associated with it, happens to excite Nauseas, Vomitings, Anxieties, Heat, Burnings, &c. even after all the Cleansing that can be given it by frequent Washings; and it must certainly, therefore, be most prudent to use either factitious *Cinnabar*, or that of Antimony, instead of it.

Factitious *Cinnabar*, or *Vermillion*, is a red heavy Mass, friable, and marked with shining or silver Streaks, consisting of Quicksilver and Sulphur united by the Help of Chymistry, subliming the Mixture over a Fire.]

7. Of the Corrosive Sublimate, and other Preparations of Mercury.

Pemet. CORROSIVE Sublimate, which we have from *Holland* and *Venice*, is made of common Mercury or that revived from *Cinnabar*, Spirit of Nitre, Vitriol calcined to a Whiteness, and Sea Salt decrepitated, and by the Means of a subliming Vessel reduced to a Lump that is white and shining.

That Sublimate, whether from *Holland* or *Venice*, is to be chosen, which is whitest and most shining, but the least weighty and compact that is possible; but that is to be rejected that comes from *Smyrna*, which is weighty, and full of Sparkles, because it is said that it is made with Arsenick, which I cannot affirm, because I am not certain of it; the best Way to prove it that I know, is to throw upon it a Drop of Oil of Tartar *per Deliquium*, or to rub it with a little Salt of Tartar; if it grows yellow, it is an infallible Mark that it is made of Mercury, and has the Qualities requisite to it; on the contrary, if it turn black, it is to be rejected.

Corrosive Sublimate is made use of by several Persons: as Surgeons, Goldsmiths, Farriers, and others. It is likewise used in Physick externally; but as it is one of the strongest Poisons we have,

it ought not to be used without the greatest Precautions; and the Persons who retail it ought not to sell it but to such as have Occasion for it by their Profession, as the King's Ordinances require, by which it is expressly forbid to sell any Sorts of Poisons, but to the Master of a Family: And these same Retailers are ordered to take a Note of him that buys it, declaring what he intends to do with it; and the Seller is to keep the same Drug under his own Lock and Key, so that no Body but himself may have the Sale of it. I hope this Advice will not be taken amiss, because it is designed for the public Safety.

Of Sweet Sublimate, or Mercurius dulcis.

The sweet or dulcified Mercury, or Sublimate, called likewise *Aquila alba*, or the white Eagle, is corrosive Sublimate, and crude Mercury, reduced into a white Lump, with little shining Streaks, by the Means of Fire and Glass Matrasles.

The sweet Sublimate, or dulcified Mercury, ought to be white, shining, adorned with little hard Shoots, which being put to the Tongue, is insipid; and reduced to Powder, is of a white Colour, a little upon the yellow. Great Care must be taken that it has been dulcified three Times at least; for unless it has its necessary Qualities, that is, that it be very insipid or without Taste, it may produce very ill Effects. They who bring it from *Holland*, should not so much look upon the beautiful Colour which the *Dutch* give it, as take heed that it has no Taste: For to my Knowledge there has come some from *Holland* which might have had very ill Effects, if Care had not been taken; because it had been sublimed or dulcified but once.

The sweet Sublimate is a very excellent Remedy to cure the Secret Disease, and to kill Worms in Children. The ordinary Dose is from two Grains to thirty, taken in a *Bolus*, either of some Conserves, or purgative Medicines.

Of the Mercurial Panacea.

The *Mercurial Panacea* is a sweet Sublimate made of Mercury, revived from *Cinnabar*, and dulcified or sublimated fourteen Times. I shall not be long upon this Point, because the Directors of the Hospital of the Invalids have caused a long Tract concerning it to be printed. I shall only say, that this Medicine is very much demanded and valued, as well for its Novelty, as because they pretend it is a general Medicine for the Cure of the abovementioned Diseases; and they attribute so many Qualities to it, that they have given.
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it the Name of *Panacea*, which is as much as to say, the Universal Medicine. They commonly make up this *Panacea* into little Pills, with the Mucilage of *Gum Tragacanth*, and when they are dry, they differ little in Colour or Size from the Coriander Comfit.

Of the White Precipitate.

The *White Precipitate* is a Quicksilver dissolved in the Spirit of Nitre, and precipitated by Salt into white Powder. This Powder, after having been well washed and dried, is what we called the true *White Precipitate* of Mercury, to distinguish it from other Sorts of *White Precipitate*, of which one is made of corrosive Sublimate, dissolved in a Water made of *Sal Armoniack*, and reduced into a white Powder, by casting the Oil of *Tartar per Deliquium* upon the Dissolution, and afterwards washing it and drying it as that abovementioned. The third is made likewise of the corrosive Sublimate reduced to Powder and put into warm Water; and when the volatile Spirit of *Sal Armoniack* has been cast upon it, there will remain a white Powder, which after having been washed and dried, has the same Properties as the two others, which is to raise a Salivation, or to mix with Ointments or Pomatums to cure Tetters and cutaneous Distempers.

As these Precipitates, and generally all Preparations of Mercury, are violent Remedies, in which one may run some Hazard; so they ought not to be used but with great Precautions, and the Advice of understanding Persons. The *White Precipitate* of Mercury shews itself to be in a good Condition when it is white and weighty, and exhales, being put upon a burning Coal; on the contrary, if it remains upon the Fire, or runs into Lead, it is an infallible Sign that it is nothing but white Lead ground, or some other white Powder, as that of *Roan*, or the like.

The Precipitate made with Sublimate, is extremely white, and much lighter than that which is made of crude Mercury; which may seem strange, because every thing made of Mercury is generally weighty, and this is the Reason why they that do not know it will not take it, although it is as beautiful and as good as that which is made of crude Mercury.

Of Red Precipitate.

The *Red Precipitate* is Mercury dissolved in Spirit of Nitre, and afterwards put into a Glass Cucurbit in a Sand Head, to evaporate the Humidity; which done there remains a Mass, which,

by augmenting the Fire, acquires a red Colour, such as that which comes from *Holland* is of. As for those *Red Precipitates*, which are made by the Artists in *Paris*, and other Parts of *France*, they have as many different Colours as there are People who make them, and there are few of them can come up to that of *Holland*. 'Tis this which makes the greatest Part of the *Red Precipitates* which are sold, to be sometimes red, and sometimes of an Orange, or some other Colour, and never shining, unless it be that which comes from *Holland*; however, I will not say but it may be as good, though it be not as saleable. There are likewise two other Sorts of *Red Precipitate*, one of a Rose Colour, which is made when, instead of putting the Dissolution of Mercury in the Spirit of Nitre upon the Fire, they pour upon it hot Urine, and there will soon be a Precipitate of a Rose Colour, which being washed is good for the Worms or the Itch, and may serve for the same Uses as the *Red Precipitate* made by Fire. The third *Red Precipitate* is made of Sublimate dissolved in warm Water, upon which they pour the Oil of *Tartar per Deliquium*. Mr. *Lemery* says, that this Preparation of Sublimate is the true *Red Precipitate*, but that it does not act so violently as that of Mercury. These two last Precipitates are very seldom used, because the first is most in Vogue, which ought to be faithfully prepared that it may be good; and Care must be taken that it be not mixed with red Lead, which may easily be known by rubbing it upon a Piece of Gold, for if it makes it white, it is a Sign that is good, and that it is made of Mercury; but if it makes it black, it is a Proof that it retains a Tincture of Lead, and that it is mixed with it. You may likewise put it upon the Fire, and it is a good Sign if it exhales: However, I must say, that that which comes from *Holland* is most preferable, as well because it is more beautiful, and consequently more saleable, as because we can sell it cheaper, especially in time of Peace, than any that can be made in *France*.

Of Yellow Precipitate.

The *Yellow Precipitate*, or *Turbith Mineral*, is Mercury revived from Cinnabar, dissolved in the Oil of Vitriol, and afterwards with lukewarm Water precipitated to a yellow Powder, which being washed and dried, is used as a strong Purgative and Emetick.

They likewise make a *Yellow Precipitate*, by dissolving powdered Sublimate in warm Water, and pouring Lime-water upon it, and the yellow Powder, which will be found at the Bottom, after being washed and dried, may pass for *Yellow Precipitate*.

ecipitate, or *Turbith Mineral*. Mr. Lemery says, this Dissolution or yellow Water, is called Phagedenick Water, or Water for Ulcers, because it is proper to cleanse and heal Ulcers. The Surgeons make frequent Use of it in the Hospitals; but the common Phagedenick Water is Lime-water into which they have put a little Sublimate.

Of Green Precipitate.

The *Green Precipitate* is made of Mercury and Copper, dissolved in Spirit of Nitre, and afterwards thrown down to a Powder of a green Colour, which is made use of to purge upwards and downwards; and, as some pretend, it is a Specifick to cure venereal Distempers.

It is observable, that the more Copper is used in this Operation, the more Acridity it has, and greater will be its Effect. This Precipitation is very little made use of, and was very little known, before the *Sieur Matte de la Faveur*, the King's Distiller at *Montpellier*, gave us a Description of it.

Of the Oil of Mercury.

The *Oil*, or, to speak more properly, the *Liquor of Mercury*, is Quicksilver dissolved in the Oil of Vitriol, and reduced into a white Mass by the Means of Fire, which being put in a Cellar, will dissolve and be reduced to Water. You may likewise make it with sweet Sublimate, and *Sal Armoniack*; or instead of *Sal Armoniack*, you may use Salt of *Saturn*, or in the Room of Salt of *Saturn*, Sugar-Candy; and so of several other Sorts enumerated by several Authors.

[The most used of all the Preparations of Quicksilver, is the *Mercurius Dulcis* (or *Calomel*, as it is called when it has undergone four more Sublimations) and that with great Reason, as it is the mildest and safest of them all; it purges gently, divides all viscous pituitous Humours, kills Worms, and is the great Remedy in venereal Diseases. The Dose is from five to fifteen Grains at Night going to Rest; but if this Method be continued for some Days without purging between, it will raise a Salivation.

The *Mercurial Panacea* of the *French*, which *Lewis* the Fourteenth purchased the Secret of making, and caused to be made public, is made of crude Mercury, purified by being first made into Cinnabar, and then revived from thence. Of this Mercury, corrosive Sublimate must be made and sublimed three Times, the two first with Sea Salt, and the last without any Addition; Part of this Sublimate is to be again reduced to running

Mercury, by distilling with *Regulus* of Antimony; and this running Mercury, mixt with the remaining Sublimate, must be made into a *Calomel* by nine Sublimations, which is to be put into an aromatized Spirit of Wine, and digested for three Weeks, and afterwards separated from the Liquor, and dried for use. It is an excellent Medicine in Venereal, and all other Cases where Mercurials are proper, and is the least purging of them all; but the Tedioufness of the Preparation makes it never to be met with.

The other Preparations of Mercury have their Virtues, and those very great, but are not to be meddled with but by those who well understand them; and indeed they are so subject to Adulterations, that they often deceive those who ever so well know what Effects they would produce if genuine and well prepared.

Of the Adulterations of the several mercurial Medicines in use, and the pernicious Effects of them, I could say such Things as those who have not so much examined into them could scarce believe, but shall not publish them here, lest, while I am warning others to beware by shewing what the Adulterations are, and how to be discovered, I teach some of our modern Chymists, as they call themselves, to be greater Villains than at present their Ignorance will permit them to be.]

8. Of Tin.

TIN, which the Antients called *White Lead*, is a white Metal which is not so hard as Silver, yet harder than Lead; it is full of Sulphur, and therefore melts easily. Some have given it the Name of *Jupiter*, because they pretend it draws Influences from that Planet. They pretend likewise, that it is formed of Silver and Lead, because in the Tin Mines there is sometimes both Lead and Silver, and sometimes Diamond-like Chrystals, which are fixed to the Rock from whence they take the Tin. These are naturally polished, squared, and pointed, and are of different Sizes, some as big as a Nut; but they are not hard, nor will they cut like true Diamonds. It is said that Tin is composed of Earth, and an impure Sulphur, a metallick Salt, and a Mercury a little finer and better digested than that of Lead, and that it is a Friend to Gold and Silver; for when they are once mixed, it is difficult to part them.

The greatest Part of the Tin which we have in *France* comes to us from *England*, in Pigs of different Weight, and especially from the County of *Cornwall*.

There are three Sorts of Tin at *Paris*; the plain

plain Tin, the common Tin, and Pewter. The plain Tin, which is the most beautiful, and the best Sort, is the *English Tin*, as it comes from the Mine; in working it they incorporate it with Tin-Glafs, Rose Copper, and a little Zinck to purify it. Pewter is *English Tin* mixed with common Tin and Tin-Glafs. Mr. *Lemery* has very well observed, that these Matters which are composed of stiff and brittle Parts, being united with the Tin, make its Parts firm, and render the Metal more hard, solid, and compact, and so it becomes sounding or ringing; for it is necessary that all sounding Matter should be composed of rigid Parts so disposed, that being struck upon, they should be agitated and tremble, by hitting one against the other, which cannot be done by Tin alone, because it is soft and pliant.

To know the Degrees of Goodness in Tin, they take a white Chalk that is found near *Tonnerre* in *Burgundy*, and of this Chalk they make a sort of Mould into which they pour the Tin when melted; and by Means of this Chalk the Artists know what Standard it is of, by the little Lines or Furrows found in it; or else they cast Tin Bullets in Moulds, and that which is found lightest is esteemed the best Sort, and this is the great Art and true Way of knowing. Some Authors say, that Tin or white Lead is found upon the Surface of the Earth, amongst the Sands, and in Torrents dried up; and that it is found in Grains, which being washed are cast into Moulds, in the Shape we see them. Besides the different Uses we make of Tin, the Chymists perform several Operations with it, as shall be shewn hereafter.

Besides the *English Tin*, there is some that comes from *Germany*, but it is not so good, because it is only the Refuse of that which served to tin their white Iron. We have also some brought from *Lorrain*.

Of Tin in Leaves.

Tin in Leaves, called by the *French*, *Appeau*, is an hammered Tin, which the *Dutch* have painted on one Side with their Varnish, making it of what Colour they please; as yellow, red, black, sky-colour, &c. The *Tin in Leaves* ought to be uniform, well varnished, whole, and as evenly rolled as possible. The *Dutch* send it in Boxes which hold commonly a Gross, that is twelve Dozen.

This Tin was once much used in *France* by the Wax-Chandlers, but at present its greatest Use there is for Coats of Arms and Atchievements used on the Death of Persons of Quality.

Of Tin in Powder.

They reduce Tin into Powder two Ways, either with beaten Charcoal, or with Chalk, as shall be afterwards shewn in the Chapter of Lead. They who work upon Tin, instead of grinding it to Powder, burn it, that is, calcine it, and reduce it to a grey Powder, which is that which we and the Pewterers sell under the Name of *Putty of Tin*, and use it to burnish their Hammers with, and others to polish their Steel Mirrors. They who would make this *Putty* extremely white, calcine it 'till it becomes of a most beautiful white Colour. This Tin calcined to such a Whiteness, is what the Chymists call the *Ceruse* or *Calx* of Tin, and others the *Spanish White*, or *Bezoar* of Tin.

Some Authors affirm, that Tin may be reduced into a *Calx* or *Ceruse* by the Help of Urine, and that the Urine acts upon Tin, as Vinegar upon Lead. Besides the Uses that the Chymists have for this calcined Tin, it is much used by the Potters, who make of it their beautiful Varnish, or white Enamel that is upon the *Delft Ware*. But it is observable, that this *Ceruse* of Tin, before it can be used by the Potters, must be exposed to the Weather for a Twelvemonth, that so the Air may make a second Calcination; but Care must be taken that it have no Impurities among it, because they would make so many Spots upon the Works.

Of Salt of Tin.

The Salt of Tin, is Tin calcined, upon which they have poured distilled Vinegar; by Means of Fire, and a cool Place, they draw thence a white Salt in little Crystals, which they make use for Tettors mixt with *Pomatum*. It ought to be dry, white, light, and in little Shoots.

Of Flowers of Tin, or of Jupiter.

They draw from Tin and *Sal Armoniack*, by the Help of a subliming Vessel, white Flowers of Tin. Instead of *Sal Armoniack*, others use Salt-Petre refined. They make also of the Flowers of Tin, by Means of the volatile Spirit of *Sal Armoniack*, or Oil of *Tartar per Deliquium*, a Magistery of Tin, which being dulcified, washed in Water, and dried, is of a very fine White; so that being mixed with *Pomatum*, it is used for Paint. The Flowers of Tin are often put to the same Uses as the Magistery.

Of the Diaphoretick of Tin.

The *Diaphoretick Tin*, which Mr. *Lemery* calls the *Jovial Diaphoretick*, or the *Antihætick* of *Potterius*,

Poterius, is made of fine *English Tin*, and the *Regulus* of Antimony with Iron, melted together; and afterwards, by means of Salt-Petre and divers Lotions, they draw thence a Powder which is used for Diseases of the Liver, the Small-Pox, and malignant Fevers, as the same Author tells us.

Tin is a Metal soft, malleable, sulphureous, white, shining, a little harder than Lead, and very easy to be melted. The Antients called it *Plumbum Album*, white Lead. It is taken out of the Mines of *England*, and other Places, and brought to us in Pigs. At *Paris* we have three Sorts of it.

The first is that Tin which is without Mixture, as it comes from the Mine, and this is the true Tin. The second is the common Tin, which is an Allay of the natural Tin of Lead and Brass. The third is the founding Tin, or Pewter, which is a Mixture of Tin, Bismuth, and Copper, and a little Zinck. They sometimes put in some *Regulus* of Antimony, and its sulphureous vomitive Salt is not to be feared upon this Occasion, because it is absorbed and mortified by the great Quantity of other Metals with which it is incorporated.

Natural Tin is not founding, because it is too soft and pliant; for to render any Matter founding, it is requisite that it be composed of firm rigid Parts, which being struck, may tremble and hit one against the other; which Quality is found in the Tin which is hardened and made solid by Bismuth, or by Antimony and Copper. This Tin, when fine and well composed, is very much like Silver.

Natural Tin is looked upon as proper for Diseases of the Liver and the Womb, but I have found but little of this Virtue in my Experience of it.

[Tin is the *Plumbum Candidum*, *Kentm.* 85. *Fabr.* 16. *Plumbum Candidum* alias *Stannum*, *Charl. Foss.* 85. *Stannum Jupiter*, *Mont. Exot.* 13. There is some Confusion among the Antients about *Plumbum* and *Stannum*, Lead and Tin, as we english those Words. The Greek Authors often use the same Names indifferently to express both; and their Interpreters have rendered the Word *κασσίτερος*, both by *Plumbum* and *Stannum*. *Pliny* however says, that Term means only what he calls *Plumbum Album*, which he makes to be different from *Stannum*, which he says is a Kind of *Plumbum Nigrum*, found in the same Veins with Silver. But either this Distinction of *Pliny* between *Plumbum Album* and *Stannum* is groundless, or else the *Stannum* of the Antients was nothing but the purer and more shining Part of the Lead, or a

Mixture of the *Plumbum Album* and *Nigrum*, or *Plumbum Nigrum* and Silver. *Agricola* mentions three Kinds of *Plumbum*, one white, which we now call Tin, another of an ash-colour, which is our Bismuth, and a third black, which is our Lead. Tin therefore is properly the *κασσίτερος* of the Greeks, and the *Plumbum Album* of *Pliny*. It is found in several Countries; but the richest Mines are in *Cornwall* and *Devonshire* in *England*: It is commonly got either in Grains, or from a stony Substance, sometimes black, sometimes yellow, and sometimes whitish. Some of these Stones are very hard, others brittle and crumbling. When it is taken out of the Mine, it is separated from the Stones and Earth by washing, and then melted and cast into Moulds. Various Substances are found mixed with Tin Ore, particularly one which is soft, and of a saponaceous Nature, soluble in Water, and containing pellucid Stones like Crystals, and some of other Kinds. Tin is the lightest of all Metals, its specifick Gravity to that of Gold is as three to eight; being laid on a Tile in the Focus of a great burning Glass, it emits a thick roapy Fume in great Quantities, leaving a fine white Calx behind, which if held longer before the Burning Glass, turns to small Crystals, or little pellucid Filaments. This Substance cannot be melted any more without the Assistance of Charcoal, by means of which it is again revived into Tin. The Filings of Tin thrown into the Flame of a Candle take Fire, and make the Flame blue, emitting a Smoak and Smell like Sulphur mixed with Garlick. Hence it is evident, that Tin consists of a vitrifiable Earth, and a sulphureous Principle, mixed probably with an arsenical Salt. It melts the most easily of all Metals, but is soluble only in *Aqua regia*. The principal Preparations of it are the *Sal Jovis antisepticum Poterii*, and *Aurum Mosaicum*, but they are neither of them much used at present.]

Of natural Bismuth, or Tin-glass.

Whatever Pains I have taken to discover if there were any such thing as true natural *Bismuth*, it has always been impossible for me to find it; and all those with whom I have conversed, either by Word of Mouth, or Letter, have agreed that there was no other Tin-glass than that we sell, which is an artificial one, as I shall shew presently. However, I shall not be positive that there is no such thing, but only say that it has not come to my Knowledge, and therefore I cannot contradict them who have written, that Tin-glass was a sulphureous Marcasite, which is found in the Tin-Mines, or that

that it is a mineral Body, or half Metal, composed of the first Matter of Tin, which is yet imperfect; and that it is found in the Tin-Mines, and has a Substance that is very hard, weighty, brittle, and of a gross Grain, smooth, white, and shining. They say likewise, that it is called *Tin-glass*, because when it is beat to Powder, there appear in it several little Substances, smooth as Glass. They call it also the *Marcasite*, by way of Excellence, because it surpasses all others in Whiteness and Beauty. They say it contains an arsenical Salt, which is dangerous to be taken inwardly.

This however I shall venture to affirm, that they have all run into the Error of thinking the *Bismuth* we sell, a natural, whereas it is an artificial Substance.

Of the ordinary Tin-glass.

The common *Tin-glass*, which some call *Bismuth*, is a Mixture of Tin, Tartar, and Salt-petre, from whence, by the Means of Fire and a Crucible, they draw a *Tin-glass* very white and pure, and much whiter than the *Tin-glass* that is brought from *England*. And this Difference, as I have been told, proceeds from nothing but the Degree of Fire.

Tin-glass may not improperly be called the *Regulus* of *Tin*, since it is so in Effect. And it is a Thing so probable, nay, so sure, that the *Tin-glass* we sell is artificial, that the very Figure demonstrates it; for it is easy to see that it is a Metal melted and cast in a Mortar, warmed and greased, as they do to other Sorts of *Regulus*. And it is so true, that *Tin-glass* is artificial, that I have made it myself, and am ready to shew it to those who will not believe me.

Tin-glass should be made Choice of, that is in fine Scales, white, and easy to break; and that is to be rejected which is in little Scales, and, in a Word, comes near the Figure of *Regulus* of Antimony, as well as that which being broke in two, has some greater and some lesser Scales, and is of a dark Colour.

The Use of *Tin-glass* is for the Pewterers, who at present make use of it instead of *Regulus* of Antimony; or else for the Chymists, who from thence draw Flowers, and a Magistery, or white Precipitate.

To draw the Flowers of *Tin-glass* they calcine it, and with *Sal Armoniack*, and a subliming Vessel, draw thence the Flowers, which when dissolved in Water, and precipitated with the Spirit of *Sal Armoniack*, or Oil of Tartar, may be used as the Magistery of *Bismuth* that I am going to speak of.

VOL. II.

Of the Magistery of common Bismuth.

The Magistery of *Bismuth*, which some improperly call the *Spanish* or Pearl White, is *Tin-glass* dissolved in Spirit of Nitre, and precipitated into a white Powder, with a little common Salt, and afterwards well washed and dried. There are Peruke-makers that use this *Magistery*, for the making red Hair look of a light Colour; but this Trick will be easily discovered, because the Colour will not remain long, especially if the Peruke comes into the Rain.

The Magistery of *Bismuth* is sometimes used for the Face, by putting it into Pomatums, or diluting it with Lilly or Bean-flower Water. It is good for the Itch, because, according to Mr. *Lemery*, it destroys the Acids or Salts that nourish that Distemper. One must take care not to be over-stocked with this *Magistery*, because its Colour will from white become yellowish as it grows old, and so it will become unfit for Sale.

This *Magistery* should be bought of honest Persons, for there are a great many Cheats in it, and there is no body can answer for it but he that made it, and therefore you must not stand upon the Price.

Bismuth is a metallick Matter, but it is hard, brittle, shining within, disposed into smooth Shoots, bright and shining as little Pieces of Glass. This Matter is drawn from the gross and impure Tin that is found in the Mines of *England*. The Workmen mix this Tin with equal Parts of Tartar and Salt-petre. This Mixture they throw by Degrees into Crucibles made red-hot in a large Fire. Afterwards, when the Matter is melted, they pour it into Iron Mortars that are greased, and there let it stand to cool. Then they separate the *Regulus* that is at the Bottom from the *Scoria*, and wash it well. It is the *Tin-glass* that one may properly call the *Regulus* of *Tin*. Some People say, that in the Tin of which they make *Bismuth*, there is always a little Mixture of Arsenick. We can make *Bismuth* in *France*, with ordinary Tin, Salt-petre, and Tartar, as I have said; but it will be brighter than that of *England*, because the Tin we use is purer than that they use in *England*.

This Operation is the same as that of *Regulus* of Antimony; there is the same Detonation and Purification of the gross Sulphur contained in the Metal; the looser Parts of the Sulphur are elevated with the volatile Parts of the Salt-petre, and the Oil of Tartar, by the Detonation; afterwards the fixed Salts of the Salt-petre and the Tartar, which are become Alkalies, dissolve the other Part

of the Sulphur, which renders the Tin hard and brittle, whereas before it was pliant and malleable; for this Sulphur made the Ductility, and the exact Ties between all the Parts of the Metal. It may likewise happen, that some small Portion of the Salts of Tartar and Salt-petre may penetrate this *Regulus* of Tin, and so contribute to the making of it brittle.

Bismuth is brought to us in round or orbicular Lumps, flat below, and round above, and of the same Figure with those of *Regulus* of Antimony, which was cast in a Mortar whilst it was in Fusion.

Tin-glass is to be made choice of in fine large Pieces, shining, whose Shoots are large, white, and sparkling. The Pewterers mix it with their Tin, to render it more beautiful and sounding.

It is resolute and drying, being beat to Powder, and made up either into an Ointment, or a Plaster.

Zinck, which has been mentioned above, is a sort of Marcasite, or a metallick Matter, resembling Bismuth, but less brittle, and in some Measure pliable to the Hammer. It grows in the Mines, and principally in those of *Gosselar* in Saxony. That is best which is hard, difficult to break, white, with Shoots that are large and shining. It is used to cleanse and whiten the Tin, as they make use of Lead to purify Gold and Silver. The Workmen mix in their Casting about six hundred Pounds of Tin, with one Pound of this Mineral.

Zinck is made use of in Solder: they likewise mix it with Copper to give it the Colour of Gold.

Zinck is resolute and drying, being applied outwardly.

[What our Authors describe as *Bismuth*, is indeed no more than a *Regulus* of Tin: but there is a true genuine mineral *Bismuth*, which is the *Bismuthum sive Plumbum Cinereum, Worm. 129. Marcasita sive Bismuthum, Schrod. 456. Bismuthum, Wood. Alt. Tom. ii. p. 1. Plumbum Cinereum, Agricola*. It is a metallick Substance, fusible, but not ductile, very brittle and heavy, and distinguishable from Lead and Tin by its Colour, which is sometimes shining like Silver, and sometimes purplish; resembling the *Regulus* of Antimony, but consisting of broader *Laminae*, and staining the Fingers. It is prepared by Artists, being first torrifed, and then melted into a *Regulus*. It is often found in Silver Mines, and indeed wherever it is found, the Miners conclude they shall find Silver. The principal Mines of *Bismuth* are in *Misnia* and *Bohemia*: some pretend that it may be extracted from *Cobalt*, melted into a *Regulus*, but this wants Proof.

Bismuth seems to have been unknown both to

the *Greeks* and *Arabians*; for the *Arabian Marcasite* was the *Pyrites*, as has been observed before. It is scarce at all used in Medicine, but a good deal is sold to the Pewterers and Dealers in Hair.

Zinck is the metalline Part of *Lapis Calaminaris*.]

9. Of Enamels.

ENAMELS are Vitifications made *Pomet.* of Tin, Sand, and Pot-ashes of *Allicant*, to which they give divers Colours, with different Metals, as shall be shewn hereafter.

The *Enamels* come from *Venice* and *Holland*, and are in flat Cakes of different Sizes, and different Marks; some have the Name of *Jesus*, some have the Figure of a Sun, and the like, from the different Workmen that made them.

The first is the *White Enamel*, which is the Basis of all the others, and is made of Tin calcined, or Putty, of Sand and Pot-ashes, which having undergone a great Fire, are reduced to a Paste, and being cooled, become hard as a Stone. It is this white Enamel which they use at present for varnishing their Earthen Ware, rather than Tin calcined and exposed to the Air and Weather for a Year together, that Operation being too long. *White Enamel* is used by the Enamellers, Goldsmiths, and others: as for the Choice of it, there are none but they that use it, that can know the Beauty and Goodness of it; the Whiteness is more or less according to the Goodness of the Tin it is made of.

The second *Enamel* is of a Gridelin approaching to a Slate Colour, which is white Enamel coloured with Azure.

The third is of a Sky Colour, which is a white Enamel coloured with Copper, and Cyprus Vitriol.

The fourth is of a Flesh Colour, which is white Enamel coloured with the Perigord Stone.

The fifth is the Yellow, which is the White coloured with Rust of Iron.

The sixth is Green, which is White coloured with Pin Dust, or other Filing of Brass.

The seventh is the Blue, which the Enamellers call the *Faux-lapis*, the false Stone; which is the sky-coloured Enamel, made with *Lapis Lazuli*. These Enamels will also make different Colours, that is, many Colours are made of one, by putting in more or less of the Metals, or Drugs, before-mentioned.

Enamel is called *Encaustum*, from a Greek Word signifying *Burning*, because *Lemery*. Enamel is made by a great Fire: but the *Encaustum*, or Enamel of the Antients, was quite another Thing from that which we now use, and is supposed to be wholly lost. The making

making Enamels is a Work almost of the same Nature with making artificial Gems, and a Mixture of the same Colours, with this Difference, that in Gems the Mass is transparent, according to the Nature of them, but in this it is opacous and solid, it being Tin, which gives it such a Body and Solidity. The Ancients made their chequered or Mosaick Work of it; and Goldsmiths now use it in colouring and enamelling of Gold.

As for Enamelling, these Things must be generally observed: that the Pots in which the Enamel is made, be glazed with white Glass, and able to endure the Fire: that the Mass and Colours for the Enamel, be well mixed and incorporated: that the Enamel, when well mixed, refined, and of a good Colour, be taken out of the Fire with a Pair of Goldsmith's Tongs: that Care be taken that no Dirt or Ashes fall in or mix with it.

The Way of making Enamel, is this: powder, grind, and searfe well the Colours, and mix them well first with one another, and then with the Matter for the Enamel, then set them in Pots in the Furnace; when they are all melted and incorporated, cast them into Water, and when dried, set them into the Furnace again to melt, which they will soon do, and then make Proof; and if the Colour be too high, add more of the Matter for Enamel; if too light, add more of the Colour till it is exact, then take it out of the Furnace.

The common Matter for all Enamels, is thus made: take fine Lead, thirty Pounds; fine Tin, thirty three Pounds; calcine them together in a Furnace and searfe them; boil this Calx a little in fair Water in an Earthen Vessel; take it off the Fire, and decant off the Water, which will carry off with it the finer Part of the Calx; put fresh Water to the Remainder, and boil and decant it as before; repeat this as often as the Water carries off any Calx; re-calcine the gross remaining Calx, and then draw off again the more subtle Parts as before: then evaporate these Waters which carried off the Calx at a gentle Fire, that the Calx may not be wasted, which will remain at the Bottom much finer than ordinary. Take of this fine Calx, Cryстал Frit made of Tarso, which is a hard and most white Marble, ground and searfed fine, of each six Pounds four Ounces; of pure white Salt of Tartar, one Ounce; searfe and mix them well: Put this Mixture into a new Earthen Pot, giving it a Fire for ten Hours; then powder it, and keep it in a clean dry Place: of this Mixture all Enamels whatsoever are made.

Although these Enamels are not made use of in Medicine, yet they have their Virtues according to the Qualities of the several Drugs they are composed of; but they must be very well ground upon

a Marble, if you would have them produce any Effect.

The white, the blue, and the yellow Enamel, are purely Desiccatives, but the others are Deterfives and Desiccatives.

To this Account might be added the Manner of preparing the *Encaustum cæruleum*, and *Zafferæ*, both much used by the Potters, Glasfmen, and Enamellers; which are Preparations of *Cobalt*, to be treated of hereafter, and many others: But as they are of no use in Medicine, I judge it would be improper to give a long Account of them in this Place.

10. Of Copper.

COPPER is a Metal composed of a little Salt and Mercury, and abounding in Sulphur and Vitriol: it is also called *Venus*, from the Influences it is supposed to receive from that Planet: it is found in several Parts of *Europe*, but principally in *Sweden* and *Denmark*, from whence we have almost all that we sell. *Copper* is taken out of the Mine in Sand and Stone, almost like Iron; and after it is washed and purified from the Earth mixt with it, it is cast into Moulds of different Figures: To render it true Rose *Copper*, they melt it the second Time, and when it is well refined, they cast it into Moulds of Sand, where it falls into Cakes that are not smooth, but as we see them. When they would make this *Copper* malleable, they melt it a third Time, and afterwards form it into Cakes of three Inches thick, and about fifteen Inches Diameter. Of these Cakes, put whole or in Quarters into the Fire, they make Plates, and of these Plates they make Cauldrons, by the Means of Hammers that work by a Water-mill, and the Plates are formed into the Vessels by one that turns these Plates, with his Legs covered with Sheeps Skins, whereby he reduces them into what Shapes he pleases, with very little Use of his Hands.

Copper is a Metal very hard and dry before it is melted; and when it has been often melted, it becomes ductile, and almost as malleable as Gold or Silver. From *Copper* the Chymists draw several Things very proper for divers Uses, as shall be shewn hereafter.

Æs, sive Cuprum, sive Venus, that is, *Copper*, is a beautiful Metal, shining, of a reddish Colour, easy to rust, abounding in Vitriol. It is found in several Places of *Europe*, but principally in *Sweden* and *Denmark*; it is taken from the Mine in Lumps, which are superficially washed to cleanse it from the Earth that is mixed with it, and afterwards melted with

vehement Fires. 'Tis to be observed, this Metal is very difficult to be melted: they purify it from its *Scoria*, and cast it into Moulds. When the same Copper has been twice or thrice melted, it becomes more pure and ductile, and you have a red Copper more beautiful than the common.

Copper is a Metal of good Use in Physick, and is said to strengthen the generative Parts in Men and Women; but used crude in the Stomach in Filings, or the like, it is little better than Poison, being hot to the last Degree, and of a caustick Nature, causing Pain in the Stomach and Belly, Vomiting, Fluxes, Ulcers, and Difficulty of Breathing; and if it be calcined, it is yet worse. The Cure, if any one be hurt with it, is by warm Water mixed with Oil, Oil alone and Butter, Hogs Lard melted and drank; and if it be got into the Guts, by Clysters of the like Kind, Salt and Oil of Tartar, and other Alcalies; Juice of Mints, and such other Remedies as are used against Arsenick.

Thin Plates of *Copper* infused all Night in Lime-water only, or in Lime-water mixed with volatile Salt, or Spirit of *Sal Armoniack*, make an admirable *Collyrium* for the Eyes to wash with against Mists, Clouds, Films, Pearls, Suffusions, &c.

Copper is made or generated of a purple Sulphur, a red Salt, and a Citrine Mercury.

[*Copper* is a Metal softer than Iron, sonorous, shining when polished, fusible, and ductile to a great Degree. It is found in the Mines sometimes pure, in form of small Rods, Branches, Globules, or Masses of different Figures, but commonly is contained in a particular Ore. This, in some, is of a shining Gold Colour, which arises from its Sulphur, and does not shew it to be at all the richer; in others it is yellow, Violet coloured, purplish, bluish, or blackish, mixed with gold coloured Sparkles, and green Streaks. *Copper* is seldom found alone, but generally accompanied with some other Metal, as Silver, Iron, or Lead, and with a large Quantity of a combustible Sulphur, hard to be separated from it. These different Ores, are differently managed by the Workmen, according to the different Substances they contain: those which contain the greatest Quantities of Sulphur, must sometimes undergo nine or ten Torrefactions before it can be exhaled; and if Silver is contained in it, they separate it by means of Lead.

There are some Springs of *Copper* Waters, from which Vitriol may be made by Evaporation, and *Copper* may be precipitated from them by means of Iron, which has made some believe they turned Iron into Copper. The most famous of

these Springs is that in the *Carpathian* Mountains, which will turn a Horseshoe of Iron into the Appearance of a Copper one in a very little Time, even corroding the Iron, and substituting, in some Degree, *Copper* in its Place. The specific Gravity of *Copper* is to Gold as four to nine nearly: when exposed to Moisture, it contracts a green Rust: it is soluble in Water, and to be corroded by all Oils and Salts, its Solution by Acid or fixed alkali Salts is green; by urinous blue: The Filings thrown into the Flame of a Candle burn and emit a greenish Flame, but do not sparkle. *Copper* long calcined, turns to reddish Ashes, which, placed on a Tile before a Burning-glass, turn to an intensely red Glass almost opaque; and this Glass laid on a Piece of Charcoal, before the same Glass, revives into *Copper*. Hence it is evident, that *Copper* consists of a large Quantity of a combustible Sulphur, and a red vitrifiable Earth, which shewed itself pure in the Fire when the Sulphur was all exhaled. It is little used in Medicine, for its Salts are truly poisonous.]

11. Of Yellow Copper, or Brass.

YELLOW *Copper*, is old or broken *Copper* melted and made yellow by means of the true *Calaminaris* Stone. The greatest Quantity of Brass or yellow Copper, is made in *Germany* and *Flanders*. They beat this Brass, and reduce it to the Thinness of Paper; and this is what we call Tinsel. They afterwards beat this Tinsel over again, and make it extremely thin, and afterwards put it into little Books of Paper, and call it *German Gold*. They grind this *German Gold* to Powder, to make a Bronze Powder for the Casters of Statues in Plaster, &c. which has more or less Colour, according to the several Times that it has passed the Fire. They also grind this Brass over and over again, 'till it becomes an impalpable Powder, which they sell under the Name of *German Gold* in Powder. Others put this Powder Gold into Muscle Shells, and call it Shell Gold. That Shell Gold is most esteemed that comes from *Augsburg* in *Germany*, and has the Name of *Augusta*. As to the Choice of the *German Gold*, either in the Leaf, the Powder, or the Shell, that which is finest, and highest in Colour, is esteemed the best. The *German Gold* is used by Painters, especially such as paint in Miniature. The Painters Bronze is likewise used by them; and also to make Figures of Plaster have a Brass or Copper Colour, and for other Uses.

Besides the different Preparations that are made of this yellow Copper, the *Venetians*, as I am assured, make of it that which the *French* call *Purpurine*,

purine, which heretofore was made use of upon Coaches. By means of this yellow Copper, and the Help of Fire, they make that Sort of Vitri-fication, which the Enamellers call *Avanturine*; and they say the Name was given it because this Operation was found by Accident, and without being thought of, by some Dust of yellow Copper which fell into a Furnace where Glass was melting. *Avanturine* is all embellished with Spangles of gold Colour. There is also an *Avanturine* that is found naturally in several Places of France.

Aurichalcum, yellow Copper, or *Leton*, *Lemery*. is a Mixture of Copper and *Calaminaris* Stone melted together by a very vehement Fire in Furnaces made on Purpose. The Discovery was made by the Alchymists, who endeavouring to turn Copper into Gold, found how to give it a yellow Colour. The greatest Part comes from *Flanders* and *Germany*. The *Calaminaris* Stone embarrasses and extends the acrid Salts of the Metal to that Degree, that Brass does not make the same Impression on Liquors, as the red Copper. Besides, as the *Calaminaris* Stone costs but little, so the yellow Copper is cheaper than the natural.

That which we call *Tinsel*, is yellow Copper beat to a Leaf as thin as Paper, and is used by the Lacemen.

German Gold is *Tinsel* beat very thin, and kept in little Paper Books for the Use of Painters.

The Painters Brass is the *German Gold* ground to Powder, which is put into little Shells, and called *Shell Gold*. It is used to colour Figures made in Plaster, and by them who paint in Miniature.

The common Brass, which the Workmen call Metal, is an Alloy of Copper with *Leton*, or with Tin. They make divers Sorts, which only differ according to the Quantity of Tin which is mixed with the Copper; the Mixture is from twelve Pounds to five and twenty Pounds, to the hundred Weight of Copper.

They use Brass for Clocks, Mortars, and several other Works. The best is that which gives the clearest Sound when you strike it.

[Brass is the *Orichalcum*, *Charlt. Foss.* 47. *Ald. Mus. Met.* 126. *Æs flavum*, *Worm.* 122. It is made by melting the Copper and *Lapis Calaminaris* together, which at first send forth a red Flame, afterwards a blue one, and finally a yellow, which is the Sign by which they know it is perfectly made; when it is cold, it is found to have gained about one third in Weight from the Quantity of the *Lapis Calaminaris* the Copper has taken up, and yet remains as ductile as before, for

it may be drawn out into very fine Wire, or beat into very thin Leaves.]

12. Of Pompholyx, or Flowers of Brass.

THE *Pompholyx*, called *White Calamine*, *Nil*, *Nihil*, *Nibili Album*, or *Pomet*. Flowers of Brass, and improperly, Bronze Ashes, is that which sticks to the Cover of the Crucible, and the Pincers of the Founders, when they melt Brass; and it is certain that nothing but Brass gives the true *Pompholyx*, and not the cast Copper, nor the Metal, nor Bronze, as the greatest Part of the Authors have written.

Although this *Pompholyx* be easy to be come at, yet there are not many Drugs more unknown; which proceeds from the Negligence or Ignorance of the Apothecaries, because they take Tutty and the *Pompholyx* to be the same Thing, and therefore they use the Tutty instead of it.

The best *Pompholyx* comes from *Holland*, not that it is in Reality better in Substance than any other, but better collected and preserved. That *Pompholyx* ought to be chosen which is very white, light, friable, clean; it matters not whether *French* or *Dutch*, so it be very white.

They who cast Bells may gather a little of it; but because it is but in very small Quantity, it is not worth while to look after it. Its principal Use is externally in Ointments, particularly that which bears its Name, and of which it is the Basis.

The *Pompholyx*, called in *Latin*, *Nil*, *Nibili Album*, *Capnites*, *Bulla Cadmica*, *Lemery*. *Calamites*, is a Flower of Brass, white and light, which is found sticking to the Cover of the Crucible in which they melt Copper with the *Lapis Calaminaris* to make Brass or *Leton*. It is found likewise sticking upon the Founders Tongs: But either through Negligence in collecting this Drug, or because the Workmen let it fall in the Fire when they uncover the Crucibles, we rarely find it amongst the Druggists, and are therefore obliged to substitute Tutty in the Room of it.

The *Pompholyx* should be light, very white, and crumbling. It is deterfive, desiccative, proper for Wounds. It is not much used, but externally for Ointments. Some give from half a Scruple to two Scruples in Intermitting Fevers. It excites Vomiting very violently.

[*Pompholyx* is the *Nil Album*, *sive Pompholyx*, *Wood. Ait. Tem.* ii. p. 50. *Pompholyx*, *Worm.* *Mus.* 135. *Kentm.* 72. *Charlt. Foss.* 55. *Ald. Mus. Met.* 16. It is a fine white Flower, or Soot, which sticks to the Arch of the Furnaces and Covers of the Crucibles in which Calamine and Copper

Copper are melted together for the making of Bräis; it has the same Virtues with Tutty, to be described hereafter, which is generally used in its Place. This is the History of the *Pompholyx* we use; but it is to be observed, that this is not the *Pompholyx* of the Antients, which is now wholly unknown in the Shops, and of which *Dioscorides* mentions two Kinds, one of a Kind of Copper Colour, and moist or fatty; the other very white and smooth: The Origin of the first of these is uncertain, but the last, he says, was made by the Coppersmiths, who, in endeavouring to meliorate that Metal, threw it into large Quantities of powdered *Cadmia*; the fine Dust that arose from this Mixture, concreted into *Pompholyx*. They likewise made it by burning *Cadmia* alone in Furnaces for having thrown it in small Pieces into the Fire, near the Nozel of the Bellows, they blew the most fine and subtile Parts against the Roof of the Furnace: This was the *Pompholyx*, and what was reflected back from thence, was the *Spodium* of the Antients, which was heavier, and of a blacker Colour. Both these Substances might still be had, if their Virtues made them worth the Trouble of preparing: But the Tutty is generally esteemed to have all their Qualities, and is, as before observed, constantly used in their Place.]

13. Of the *Æs Ustum*.

Pomet. **T**HE *Æs Ustum*, or burnt Copper, is made of red Copper cut into little Plates, and put into a Crucible with Sulphur, and a little common Salt, *Stratum super Stratum*, and put into a great Charcoal Fire; when the Sulphur is burnt away, and the Copper taken out, it is of an Iron Colour without, and reddish within, being shining and very brittle.

The *Æs Ustum*, if it be in a good Condition, should be moderately thick, and of the Colour beforementioned; and being rubbed one upon another should make a Red like that of Cinnabar, which the *Æs Ustum*, or burnt Copper cannot do, unless some Salt be put to it, which is the Secret of the *Hollanders*, whereby they make it better than that of *France*.

The *Æs Ustum* is of some small Use in Physick, because it is deterfive; but they who make Use of it, first make it red-hot in the Fire nine Times, and quench it as often in Lintseed Oil, and then reducing it to Power, use it for eating off dead Flesh; and they call this Powder of the *Æs Ustum*, so prepared, *Crocus*, or Saffron of Copper.

[This has formerly been much in Use among Chirurgeons, but the Tedioufness of the Preparation, as there is no making it without long and

violent Calcination in a Reverberatory Furnace, has made it now little used, and but seldom seen in the Shops: it is drying and astringent, with some Degree of Acrimony.]

14. Of Verdigrise.

THE natural *Verdigrise* is a greenish Marcasite like the Dross of Iron; it is found in Copper Mines, but is of no Use that I know of.

The common *Verdigrise*, or Rust of Copper, is made of Plates of red Copper, and the Skins of Grapes, after pressing, soaked in good Wine, put together in a large earthen Pot, *Stratum super Stratum*, that is to say, they put an Handful of those Skins at the Bottom of the Pot, and then a Layer of Copper, then another of Skins, and on that another of Copper, and so on till the Pot be full; then they put it in a Cellar, and after some Days Time they take out these Copper Plates, which are covered with a green Rust, by the *Latins* called *Ærugo Æris*, and this Rust being scraped off, the Plates are put in again after the same Manner as before; and this must be repeated till the Copper is consumed, or rendered so thin, that it may be mixed with the *Verdigrise*, as it often happens. The most Part of the Authors who have treated of *Verdigrise*, tell us, that it is made with Vinegar, which is not true, for the best Wine is not too good for it; and this is so true, that there is scarce any but *Languedoc* Wine that will make good *Verdigrise*. It is in and about *Montpellier* that the greatest Part of the *Verdigrise* used in *France* and other Countries is made, and it is a Commodity very difficult to make, and to hit right, although it seems as if nothing were more easy; for if never so little happens to be amiss, it grows greasy and black, and good for nothing, and will never come to a true Consistency. Had not the Receipt been stolen from me, I would have told you how they do it at *Montpellier*, which I hope to recover and present the Reader with, in the second Edition.

There are some Authors, who say, that one may make *Verdigrise* by putting Plates of Copper in a Crucible, with Salt, Sulphur, and Tartar, which being calcined and cooled, the Plates are converted into a very good *Verdigrise*; but these Operations, supposing them to be true, are at present of no Use, because all the *Verdigrise* we sell, is made in the forementioned Manner.

We have two Sorts of *Verdigrise* from *Montpellier*, the one in Powder, the other in Cake: To be good, it must be dry, of a beautiful deep Green, and with the fewest Spots possible. *Verdigrise* is a Merchandize that loses extremely in keeping,

keeping : those who deal in it, mix it with several Drugs, that there is no Necessity of naming, and render it so moist that the Merchant loses much by the Waste of it, besides what he also loses by the Skin which covers it, for which he pays as much as if it were *Verdigrife* : Therefore they who use it should consider its Goodness, and not stand upon the Price ; for I can affirm, that there is no Cake of *Verdigrife*, such as they send from *Montpellier*, that weighs twenty-five Pounds, but after it is dry has lost a third Part ; so that the *Verdigrife* that cost twenty Pence when soft, will be worth near eight and twenty Pence when thoroughly dry.

Verdigrife is a Drug very much demanded, and the Quantity of it that is used is almost incredible, not only in Physick, but by Dyers, Skinners, Hatters, Farriers, and Painters ; but it is remarkable, that *Verdigrife* alone, ground with Oil, cannot be used as a Green in Painting, but it is absolutely necessary to add white Lead to it, for otherwise, instead of being green, it would be black. As for the Properties of *Verdigrife*, the Principal of them is eating off dead Flesh. The Apothecaries use it in some Ointments and Plaisters, as the *Ægyptiac*, the *Apostolorum*, the Divine Plaister, and others. They who colour Paper green, make use of *Verdigrife* and white Tartar to give it that Colour.

The Apothecaries and others, who have Occasion for *Verdigrife* in the aforementioned Compositions, and others, instead of the Powder, may dissolve it in Vinegar, and strain through a fine Sieve, and so avoid, in reducing it to Powder, the Effects of the ill Quality of the flying Dust of *Verdigrife*.

Verdigrife, in Latin *Ærugo*, or *Viride Æris*, is a Rust of Copper penetrated and rarefied by the acid tartarous Salt of Wine. To make it, they stratify Plates of Copper with the Grape Skins when the Must is taken from them, and leave them in that Maceration till they are in part converted into a bluish green Dust, which they separate with Knives, and continue the Operation as before, till the whole be turned into *Verdigrife*. This is commonly the Work of the Women in *Languedoc*, *Provence*, and *Italy*, where the Refuse of the Grapes have the greater Force to penetrate the Copper, and work upon it with their Salt.

It deterges powerfully, it consumes proud Flesh, it attenuates and resolves, and is used only in external Medicines ; it is sharp and digesting, and cicatrises Ulcers, being mixed with Oil and Wax, and applied. It likewise cleanses them from their Filth and Putrefaction, although they were the

most stubborn, and had resisted all other Remedies.

It is of good Use in the Gout, being dissolved in fair Water, and used warm to the Part.

It cures Diseases of the Eyes, and effectually takes off Pearls and Films. But before you use it for the Eyes, or for Wounds or Ulcers, you must purify it after this Manner : Powder it, and put upon it Spirit of Vinegar six or seven Times its Weight ; digest till the Vinegar is tinged very green, which decant, and cast away the Fæces ; then evaporate the Vinegar in a Brass Vessel, and so you will have a glorious *Verdigrife* at Bottom, of which one Ounce is worth ten Ounces of the former.

Take of this fine *Verdigrife* a Drachm ; Spirit of *Sal Armoniack*, half an Ounce ; Spirit of Wine camphorated, two Ounces ; mix them for a *Collyrium* to wash the Eyes. Take the White of an Egg beaten well with Spring Water, four Ounces, and add to it *Saccharum Saturni*, ten Grains ; white Vitriol, six Grains ; and so many Drops of the *Collyrium* as may make it of an Azure Colour, with this wash the Eyes two, three, or four Times a Day.

This fine prepared *Verdigrife* being made into an Ointment with Honey, Juices of Wound Herbs, Vinegar, and absterfive Sulphur of Vitriol, is applicable to weeping Wounds, Ulcers in the Joints, &c.

[The Manner of making *Verdigrife* is this : The Husks, Stones, &c. of Grapes being first dried, and after dipped in strong Wine, are laid in wooden or earthen Vessels for nine or ten Days, till they begin to ferment ; then being squeezed together with both Hands, they are formed into Balls, which are put into proper earthen Pots, and have Wine poured over them, till about half is covered ; the Vessels have a Straw Lid thrown over them, and are set in a Wine Cellar, where the Balls are left in Maceration for twelve or fifteen Hours, being turned every four Hours, that the Wine may penetrate every Part of them ; afterwards the Balls, being raised a Finger's Breadth above the Surface of the Wine, and set upon wooden Bars, the Vessels are shut again, and left in that State for ten or twelve Days more. After which Time the Balls emit a strong and penetrating Scent, and are then fit for dissolving Copper. For this Purpose they are broke and bruised with the Hand, and the outer Part, which is driest, is mixed exactly with the inner, which is still moist with Wine. Then they are stratified with Copper Plates in the same Vessels upon wooden Bars ; the Plates making always the lowest *Stratum*, and the Balls the uppermost. The Plates are four Inches long, and

and three broad; and if the Copper be new, they must be previously buried for four and twenty Hours in *Verdigrife*, and then heated a little in the Fire. The Vessels being filled in this Manner, and shut close, are left without any farther Management till the *Verdigrife* is made, which happens sooner or later, according to the Nature of the Copper; some yielding its Rust in six Days, and some requiring fifteen or sixteen Days. The *Verdigrife* being compleatly extracted, the Plates covered with it, are taken out of the Vessels, and their Edges being moistened with the strongest Wine, they are wrapped up in Linen Cloths dipped in the same, and laid in a Wine Cellar for three Weeks, and then it is scraped off the Plates, and kept for Use.

This is the Method used at *Montpellier*, which I have been the more particular in relating, because our Author says he intended to have given it, but that the Receipt was stolen from him.]

15. Of *Verdigrife* crystallized.

Pomet. **T**HE crystallized *Verdigrife*, or Crystals of *Verdigrife*; or, as it is called by Merchants and Painters, Calcined or Distilled *Verdigrife*, is *Verdigrife* dissolved in distilled Vinegar, and afterwards filtered, evaporated, and crystallized in a Cellar. These Crystals are of some small Use in Physick, to consume dead Flesh. They are likewise used by Painters to make a green Colour, especially for Miniature.

All the Crystals of *Verdigrife* that we sell in *Paris*, come from *Holland* or *Lyons*, and are not unlike Sugar-candy, except in Colour, especially to that which is on Sticks: if good, these Crystals must be beautiful, clean, and transparent, very dry, and as free from Sticks as possible. Here it may be observed, that the Verdet which the Apothecaries make, is reduced to Crystals by the Means of a Cellar, whereas that which comes to us from the Places beforementioned, is made after the Manner of Sugar-candy, as I have been informed.

I cannot tell what has induced the Merchants to call these Crystals Distilled or Calcined *Verdigrife*, seeing it is neither distilled nor calcined, but made after the forementioned Manner.

They likewise make Crystals of *Verdigrife* by dissolving Copper granulated in Spirit of Nitre, and afterwards evaporating to a Scum or Pellicle, and setting it in a Cellar to crystallize.

If you would reduce these Crystals to a Liquor after having dried them, you must carry them back to the Cellar to resolve them into Water; and this

Liquor is called by the Apothecaries or Chymists, the Liquor of Copper or *Venus*, and the Crystals the Vitriol of *Venice* or Copper.

[These Crystals dissolved, make an admirable Liquor to deterge and dry Ulcers, and eat away fungous and callous Flesh; and are a good Ingredient, in small Quantities, in Eye-Waters for clearing the Eyes from Specks and Films.]

16. Of the Mountain *Verdigrife*, and Flowers of Brass.

THE Mountain or *Hungarian Verdigrife* *Pomet.* *grife*, is a Sort of greenish Powder in Grains, like Sand, which is found in the Mountains of *Kernaufen* in *Hungary*. It is found likewise in the Mountains of *Moravia*. What the Antients call Flowers of Brass, is made by throwing Water, or rather Wine, upon Rose Copper, whilst red, that is to say, as it comes out of the Furnace; and this Flower is gathered and found sticking to other Plates of cold Copper, which they place over them, in small Grains like Sand, and this is made by Vapours which arise when they throw Water or Wine upon the hot Copper; and it is that which makes what we call Rose Copper to be so unsmooth, and to be full of little Figures. Others have assured me, that the Mountain *Verdigrife* was Plates of Copper dissolved in Wine, and made almost after the same Manner as *Verdigrife*; but as I know no more of it, I shall only say, that such is to be made choice of as is dry, of a high Colour, well granulated, that is to say, like Sand, which is the Mark of natural Mountain *Verdigrife*, and makes the Difference between that and the Artificial, which some make by pulverizing *Verdigrife*, and putting a little white Lead amongst it.

The *Verdigrife* of the Mountain is of no other Use but in Painting, principally for making a Grass Green.

As it is a dear Commodity, and comes from several Parts, so there are different Sorts of it, and different Prices; therefore they who use it, should regard the Qualities of it, rather than the Cheapness.

[The first of these is the *Viride Montanum Hungaricum*, *Wood. Att. 2. a. 52.* It is not used in Medicine, but sometimes by the Painters.

The *Flos Aeris*, *Worm. 132. Ch. Foss. 54.* is a small granulated reddish Substance, got by pouring cold Water on melted Brass, and receiving its Vapour on an Iron Plate. It is commended as an Ophthalmick and Detergent, but is now never used nor kept by the Druggists.]

17. Of Bronze and Bell-Metal.

THIS Bronze Metal, according to Monsieur *Furetiere*, is a Composition of Metals, the Principal of which is Copper melted with some Part of Tin, or of Brass; some, for Cheapness, put in Lead. There is likewise another Compound of Copper, which is called *mixed Metal*, or *Bell-Metal*; they give one or the other of these Names according to the greater or lesser Quantity of Tin that is mixed in it, which is from twelve to five and twenty in the hundred. The Dregs of mixed Metal are called *Diphryges*, and are used in Physick. The Scales of Brass is what falls from the Brass when they hammer it and work it.

Diphryges is of a mixed Faculty, meanly astringent, sharp, and of excellent Use against spreading Ulcers. It cleanses, dries, and consumes Excrescences, and being made into a *Collyrium*, is good for dropping Eyes, and such like Diseases of the same. The best is that which has the Taste of Brass, or the Rust of it, being astringent, and very much drying the Tongue.

As for the Metal itself, we use it for making Figures, Bells, Mortars, and other Utensils. The best of it is that which is whitest, and sounds like Silver. I should not have been so long upon this Head, if it had not been for the sake of Tutty, which is procured from it, and is described under the following Head.

[The *Diphryges*, *Charl. Foss.* 55. *Aldr. Mus. Met.* 14. *Worm. Mus.* 133. is a Recrement of Brass, which subsides on wetting it while in Fusion; it is acrid and astringent, and therefore excellent in stubborn Ulcers, but at present it is unknown in the Shops.

The Scales, or *Squamæ Aëris* of the Shops, are little different from the *Aëstium*, being only the Particles of burnt Copper, which fly off while it is hammered: mixed with Sulphur and *Florentine Orrice* they cure stinking Feet, being worn in the Shoes; but this may be attended with very ill Consequences, for the sudden Checking the Sweat, which occasions that Stinking, may bring on Diseases of a much worse Kind.]

18. Of Tutty.

TUTTY of *Alexandria*, or the *Spodium* of the *Greeks*, is a metallick Substance in Scales or Gutters, of different Size and Thickness, smooth within, and rough without, with a Sort of Excrescences, like Pins Heads; for which Reason the Ancients called it *Spodium*, or *Tutty* in the Cluster. The *Tutty* which we sell in *France* comes from

Germany, and other Places, where they make mixed, or Bell-Metal. It is wrong to think, what most Authors, both new and old, have asserted, that *Tutty* is got from the yellow Copper or Brass, and that it is made at the same Time as the *Pompholyx*; for this is not true, seeing the *Tutty* is found sticking to Rolls of Earth, which are hung up, and placed on purpose on the Top of the Furnaces where the Founders cast their mixed and Bell-Metal, to retain the Fume or Vapour, which is like the Smoke in Chimneys; and by the Means of these Rolls, the Vapour is retained and reduced into a Shell of the same Figure as the Roll: And the Thing is so certain, that if one will but look amongst the *Tutty*, one may frequently find the Earth sticking to it, therefore it is not made by sticking to the Bottom or Sides of the Furnace. And that which confirms this is, that all the *Tutty* we have is in Form of a Gutter, and roundish.

Tutty ought to be in bright Scales, thick, granulated, of a fine Mouse Colour without, and a pale Yellow within, hard to break, and as little mixed with Foulness as possibly can be. *Tutty* has no other Use, that I know of, but in Medicine, and that not till it is well beaten. Others burn it, and after wash it, and make it up into little Balls, which they use for Diseases of the Eyes, mixing it with fresh Butter, or diluting it with Rose or Plantain Water. *Tutty*, well prepared, and incorporated with fresh Butter, is an excellent and sure Remedy for the Piles. That is most esteemed which comes from *Orleanse*, either because it is better prepared, or because it has all along carried the Vogue with it.

Tutty is brought from *Sweden*, *Cyprus*, *Greece*, *Turkey*, and *Ægypt*; but the *Cyprian* is the best. It was heretofore brought from *Alexandria*, and therefore Authors, in their Descriptions, call it *Tutty* of *Alexandria*. The Difference between the *Pompholyx* and the *Tutty*, or the grey *Spodium*, is this; the *Pompholyx* is more white and light, like volatile Meal; the latter is nearer the Colour of Brass, heavier, thicker, and fattish, which with Vinegar yields a Smell like Brass. *Tutty*, by some, is accounted the better Medicine, and more powerful for the Uses intended. *Cadmia*, calcined by a violent Fire, and brought to Ashes, is sold for *Tutty*; but this is a Cheat: Burnt Ivory is also sold in the Shops under the Name of *Spodium*.

It is deterfive, desiccative, proper for Diseases of the Eyes, for drying and cicatrising of Wounds, and for the Piles. It is only used externally, after being ground to a very fine Powder.

[*Tutty* is the *Lapis Tutia*, *Wood. Att.* T. ii. P. 1. p. 50. *Cadmia Botrytis*, *Ald. Mus. Met.* 16.

Q

Cadmia

Cadmia Capnitis, *Kentm.* 53. There have been a Multitude of various Opinions about this Drug; *Garzias* thought it the Ashes of a Tree; *Bontius*, a glutinous Earth; and *Douglass*, a glutinous clayey Earth of the *East-Indies* dried in Furnaces. Our Author has given a much juster Account of it than any of these; but it is to be observed, that the *Cadmia* of the Antients was different from that of the Moderns. It was the Recrement of the Copper Oar, blown off by Bellows while it was melting and sticking to the Sides of the Furnace of different Figures and Colours, and from thence distinguished into different Species. The finest Kind they esteemed that which stuck to the very Edges of the Furnace, and was as light as Wood-ashes. The next was that which hung down from the Arch of the Furnace, called *Borevādnē*, from its resembling Clusters of a middle Weight between the foregoing and the following, and of two Colours, whitish and purplish, the last of which was most valued: The third Kind was what being too heavy to ascend to the Top of the Furnace stuck to the Sides; from this two other Kinds were obtained, a bluish and a red. These were used to destroy Cicatrices, and the former for Diseases of the Eyes. The best *Cadmia* was found in the Furnaces of *Cyprus*. The Silver Furnaces were also observed to afford a *Cadmia*, but it was lighter, whiter, and much inferior to the Copper kind; and according to *Galen*, there was a kind of *Cadmia* made from a Species of *Pyrites*. But all these Kinds are now unknown in the Shops. And even the *Arabians* were so little careful about them, that they gave the same Names to other Substances; whence a great deal of Confusion has risen since, especially as some of the later *Arabians* have endeavoured to apply to these other Substances what the Antients said of the different Species of their true *Cadmia*; particularly *Avicenna* says of Litharge of Silver, all that *Dioscorides* has said of *Cadmia*.

The present *Cadmia Fernacum*, or *Tutty* of the Shops, is a Recrement of *Calaminaris* melted with Copper, and not of Copper alone, as was that of the Antients: It is, properly speaking, a Sublimation of *Lapis Calaminaris*, from the melting Copper to the upper Part of the Furnace, where it concretes round Iron Rods, placed there into a solid Crust, which is afterwards beat off into Pieces, like the Bark of Trees: And this was, in all Probability, also the *Tutty* of the *Arabians*; for *Serapion* describes a Kind of *Tutty*, produced in the Furnaces where Copper was turned into a yellow Metal.

Tutty is reckoned among the principal Ophthalmick Remedies, it deterges and dries without

Acrimony, and is used with great Success in Ulcers of the *Cornea tunica adnata*, and Eye-lids; and also in Itchings of the Eyes and inveterate Ophthalmias.

Spodium or Putty is not this, but a different Substance, mentioned in the Chapter of *Pompholyx*, but very seldom seen in the Shops.]

19. Of Chalcitis.

CHALCITIS, or native *Colcothar*, is *Pomet.* a natural Vitriol made red by subterraneous Fires in the Entrails of the Earth, which is the Reason why *Chalcitis* is found in a Stone of a reddish Colour. I shall not endeavour to write what the Antients have said touching the different Changes that happen to the *Chalcitis*, nor to explain what is *Misy*, what *Melauteria*, and what *Sory*, for I cannot tell what these three last are, or where they may be found. *Matthioli* upon *Dioscorides*, p. 729. says, that *Misy* is hard, and like Gold, and glisters like a Star, and is found in *Cyprus*. That *Melauteria* is found of two Sorts; one growing like Salt at the Entrance of Copper Mines; the other congealed at the Top of the Mines. He says, that the best *Melauteria* is that which is smooth, clean, firm, and of the Colour of Sulphur, and that turns black as soon as a Drop of Water is put upon it. As for *Sory*, he says it is black, full of Holes, and astringent to the Taste, of a very ill Smell, and that a great deal is found in *Ægypt*, *Libya*, *Spain*, and *Cyprus*. *Pliny*, on the other hand, says, that *Chalcitis*, *Misy*, *Melauteria*, and *Sory*, are the same Thing; that the one changes to the other in Process of Time, that is to say, *Chalcitis* becomes *Misy*, *Misy* turns to *Melauteria*, and *Melauteria* to *Sory*; which I could never find, though I have had a Lump of it above eighteen Years, in which I could never see any Alteration, as to its Nature or Colour, though I have been careful to observe it. It is true, there is some *Chalcitis* that has different Colours in the same Piece; but as I have found no Alteration in it by keeping all the Time I had it, I am apt to believe it was so naturally.

Chalcitis is to be chosen in pretty large Pieces, of a brownish Red, of the Taste of Vitriol, which being put into a little Water, dissolves easily, and being broke, is of a Copper Colour, but something shining.

The *Chalcitis*, or natural *Colcothar*, is brought from different Places, as from *Sweden* and *Germany*. It is a Drug very little used in Medicine, because very rare; and if it were not an Ingredient in *Venice-Treacle*, there would be scarce any Demand for it. The Dearness and Scarcity of this

this Stone has given Occasion to many Counterfeits, and to seek for *Succedaneums*, as the *Colcothar*, or Vitriol made red, the white Vitriol calcined, the *Lapis Calaminaris*, because of its Colour, and several other Things; so that Persons who want the true *Chalcitis*, must apply to honest People, and not stick at a Price.

The *Chalcitis* of *St. Christophers* is very different from this, it is greenish, like Vitriol half calcined, but it begins to be sold for the true.

Chalcitis is a Vitriol naturally calcined *Lemery*. by the subterranean Fires, and rendered into Pieces of Stone, pretty big, red, and sometimes streaked within with yellow Veins something sparkling. It is found in Copper Mines, and within side participates of that Metal. It is melted by Fire. It is brought sometimes from *Germany* and *Sweden*, but is generally very scarce in *France*.

That is most preferable, that is in pretty large Pieces, of a browish red without, which being broke, is of a Copper Colour, something shining, of the Taste of Vitriol, and easily dissolved in Water.

The *Chalcitis* is hot, dry, deterfive, and very astringent. It stops Bleeding at the Nose. It is used internally and externally; and in the Composition of *Venice-Treacle*; but not being easily got, they commonly substitute an artificial *Colcothar*, which is a green Vitriol calcined to a Redness, in the Room of it. It is of thinner Parts than *Sory*, but thicker than *Misy*. In a *Collyrium* it cleanses, dries, and heals the Eyes. The same *Collyrium*, if weakened with Rose-water, prevails against *St. Anthony's Fire*, and all Sorts of creeping Sores, whether of Skin or Flesh. With Juice of Leeks it is said to stop a Flux of Blood at the Nostrils, as also in Wounds, and of the hemorrhoidal Veins. It is good against Vices in the Gums, and eating Ulcers of the Tonsils, the Powder of it being laid upon the Part affected. Burnt, and mixed with Honey, it helps callous and rough Eyebrows, Fistulas, Leprosy, and other cutaneous Diseases.

They who distinguish *Misy* from *Chalcitis*, say, it is a natural mineral Excrement almost like Gold, which glisters when it is broken. It is commonly bred upon the *Chalcitis*, and is only the Recrement of that Mineral, being bred thereon, as Verdigrise is upon Brass. It is very astringent, burning, and of much thinner Parts than *Chalcitis*, but is of the same Virtue with it, as being bred from it, but in a different Degree. That which comes from *Aegypt* is accounted the best, and is more corrosive than *Chalcitis* or *Sory*; being calcined and burnt, or washed, it is good against ma-

lignant Ulcers or Fistulas. With Lime-water, in which a little *Sal Armoniack* is dissolved, a *Collyrium* may be made by infusing the Powder. That Water is likewise good to wash malignant Sores, and running Ulcers.

The *Melanteria* of *Dioscorides*, according to *Matthiolum*, is a mineral vitriolick Matter, of which there are two Kinds. One is found like a Salt upon the Entrance of Copper Mines, from whence they gather it. The second is found at the Top of the same Mine, in a firm, smooth, clean Stone, of the Colour of Sulphur. *Dioscorides* prefers this latter Sort to the first, and chiefly when it grows black upon being melted with a little Water. He says the *Melanteria* is found in *Cilicia*, and several other Countries: He attributes a caustick Virtue to it. This Drug is unknown to us; and many believe, with *Pliny*, that it is nothing else but the *Chalcitis*, which has taken several Shapes and Colours in the Mine. However it is, we substitute the natural *Chalcitis* in the stead of it.

Sory is a stony Mineral, vitriolick, gross, impure, porous, or naturally pierced with many Holes, fattish, black, of an ill Smell, and a styptick Taste. It is found in the Mines of *Cyprus*, *Spain*, *Libya*, and *Aegypt*; and, as *Matthiolum* says, it is found in the Dukedom of *Brunswick*. Many have thought it to have been a *Chalcitis* grown old, and that has lain long in the Mine; but there is more Probability that it was a Mixture of Vitriol and Bitumen calcined by subterranean Fires. There has been none of it found for many Ages, at least it has been neglected, and we substitute the *Chalcitis*, or natural red Vitriol in the Room of it. It was drying, burning, and astringent, not much differing from *Misy*, but of thicker and grosser Parts, and therefore less piercing.

[The natural *Chalcitis* is the *Chalcitis*, *Worm*. 26. *Aldr. Mus. Met.* 240. *Kentm.* 15. *Chalt. Foss.* 11. is a Fossil Substance resembling Copper, brittle, but not stony, and variegated with a Mixture of shining Veins, and in the Fire turns to a Red Lead or Blood Colour: it is acrid and astringent, is used in Hemorrhages, and is an Ingredient in the *Thebriaca*: but as it is very scarce, the common *Colcothar* of Vitriol, or Vitriol calcined to a Redness, are used in the Place of it.

The *Misy*, *Sory*, and *Melanteria* are Fossil Substances, much resembling *Chalcitis*, and each other, and are found chiefly in the Mines of *Cyprus*. *Galen* says, he found the *Chalcitis*, *Misy*, and *Sory* in the Mines, lying in long *Strata* upon each other; the *Sory* at the Bottom, *Chalcitis* in the Middle, and *Misy* at the Top. He also affirms, that *Chalcitis* certainly, in length of Time, changes
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into *Misy*; for that having kept a Piece of *Chalcitis*, which himself took out of the Mine, thirty Years, he found the outer Surface of it changed into *Misy*, the Middle remaining unaltered; he also observed some small Alteration in *Sory*, which made him conclude, that it is in like Manner changeable into *Chalcitis*. The first of these is the *Misy*, *Worm*. 26. *Aldr. Mus. Met.* 341. *Charlt. Foss.* 11. *Kentm.* 15. It is a Fossil yellow Substance, shining like Gold, and sparkling when broken, growing from *Chalcitis* as Verdigrise does from Copper, and seeming to be nothing more than an Efflorescence from it. It is escharotic and astringent.

The *Sory* is the *Sory*, *Worm*. 26. *Ald. Mus. Met.* 341. *Charlt. Foss.* 11. *Kentm.* 15. It is a Fossil Substance, firmer, harder, and more compact than *Chalcitis*, which emits Sparkles by Attrition: it is spongy, full of Holes, of a viscid Texture, black Colour, astringent nauseous Taste, and of a very strong Smell. The *Rusma*, used by the *Turkish* Ladies as a Depilatory, seems to be this very Substance from *Bellonius's* Description: It is a violent Emetick.

The *Melanteria*, is the *Melanteria*, *Worm*. 26. *Ald. Mus. Met.* 341. *Charlt. Foss.* 11. *Atramentum nigrum seu Sutorium Græcis Melanteria*, *Kentm.* 14. It is of two Kinds; the first found like concreted Salt, in the Passages to Copper Mines; the other hanging down from the Top of the Mines. The best is reckoned that which is of a pure Sulphur Colour, smooth, clean, and even; and which turns black as soon as it touches Water. It has the same Virtues with the former, but is, like them, scarce ever to be seen in the Shops.]

20. Of Roman Vitriol.

Pomet. **R**OMAN Vitriol is a Salt partaking of a mineral Quality, and composed of a sulphureous Earth: its Origin may be ascribed to a Sort of Marcasite, found in Iron and Copper Mines, to which the Antients have given the Name of *Pyrites*: It is drawn from this by the Means of Water. This Stone is found under our Clay-pits at *Passy*, within a League of *Paris*, and several Operations have been performed upon it; and, as I have been assured, it was with this that a certain Abbot made his universal Medicine. The *Pyrites*, from whence they extract the *Roman Vitriol*, is found in several Parts of *Italy*. To reduce this Marcasite to Vitriol, they expose it for some Time to the Weather, that so the Air may penetrate into it, and that it may calcine and turn into a Calx of a greenish Colour. When the *Pyrites* is fit for working, they throw it into Water, and afterwards, by the Help of Fire and wooden Tubs, reduce it to Crystals, such as we receive from *Italy*.

In a word, all the Vitriols are made as they make Allum in *England*, or Salt-petre with us. All the Difference that there is between the several Vitriols proceeds from the different Places where the Mineral is found; and as it participates of the Copper or the Iron: The Vitriols which have most of the Copper are those of *Cyprus* or *Germany*: They which have most Iron are the *Roman Vitriol*, and that from *Pisa* and *England*. When the first are rubbed upon the Blade of a Knife, wet with Spittle, they make it look red; on the contrary, the *Roman Vitriol*, and that of *Pisa* and *England*, do not change the Colour of the Knife-blade: And this has given some People an Opportunity of counterfeiting *Roman Vitriol* by *English*, which they do by washing it a little, and exposing it to the Air for some Days, till from a green it turns to a greyish Colour; but this is easy to be found out, because the true *Roman Vitriol* is in thick long Pieces, of a Grass Green, very difficult to melt, and being broke, is transparent as Glass; from whence (the *Latin* Word for Glass being *Vitrum*) some pretend that it takes its Name: Others will have it, that the Name of *Vitriol* is mysterious, and that every Letter of it is the initial Letter of a Word; so that it is as much as to say, *Visitando Interiora Terræ, Rectificando Invenies Occulium Lapidem, Veram Medicinam*.

The true *Roman Vitriol* is much sought for at present, both because of its Scarcity, as well as because it is the most proper for the making a white Powder, which they call the *Sympathetick Powder*, which is only *Roman Vitriol* exposed to the Air and the great Heat during the Dog-days for a considerable Time. When it becomes extremely white by the Calcination which the Sun has given it, it is made use of for Wounds, and to stop Blood. Some mix Gum *Tragacanth* with it. They bring us likewise from *Italy* another *Vitriol*, which comes near the Colour of the *Roman*, only it is greener, and in lesser Pieces, and is what we call *Vitriol*, or *Copperas* of *Pisa*, and is made use of by the Dyers.

The third *Vitriol* is of a martial Nature, and as it is more common, is also cheaper; this is the *English Vitriol*, or common *Copperas*: It is much used by Dyers, Hatters, and others, who have occasion for a black Colour; and they say that that which makes the *Copperas* dye black, is because the Stone it is prepared from participates of the Iron; others will have it, that it is because they who make it throw old Iron into the Liquor.

The necessary Qualities in right *English Copperas* is, that it be dry, of a clear transparent Green, with as few small and whitish Pieces as possible.

Of the Cyprian or Hungarian Vitriol.

This *Vitriol* has its Name from the Places from whence it is brought; it is of a Sky-blue, and in large Crystals. Notwithstanding all the Pains I have taken to discover what the *Vitriol* of *Cyprus*, which we sell, might be, I have not been able to learn it. The Sentiments of Authors differ exceedingly about it, some say it is a Crystallization made of a blue Water which is found in Copper Mines. A Person of Worth and Honesty has affirmed to me, that the *Vitriol* of *Cyprus* was made of Rose Copper dissolved in the Spirit of *Vitriol*, and afterwards crystallized. Another has told me, that it was made of *German* Copperas; but not knowing which Part to take amongst the three, I shall only say, that it partakes of Copper, and that two Sorts of it are brought to us from *Cyprus*; one in large Pieces, which we call the *Company's Vitriol*, because the Merchants trading to the *Indies* bring it to us; the other cut into Bits on Purpose, with Points like Diamonds, to make it look more beautiful, and promote the Sale.

The *Vitriol* of *Cyprus* or *Hungary* is to be chosen of a fine sky-coloured Blue, especially when broken; for being a Commodity easily to be penetrated by the Air, it will come to be of a whitish grey on the Outside, which does not at all diminish its Goodness, but renders it not so saleable to the Eye; and a Sign that it is the Superficies only that is damaged, is this, that by putting it to the Tongue, upon the Approach of the least Moisture, it will come to its Colour. Some Persons have assured me, that so piercing a Spirit is drawn from the *Vitriol* of *Cyprus*, that it will break any Glass Vessel of whatsoever Thickness; and yet though so piercing, being mixed with an equal Quantity of Water, it is a sovereign Remedy for consolidating all green Wounds, and stopping of Blood; which is probable enough, because we have no Drug more astringent, or that stops Blood better than the *Vitriol* of *Cyprus*. This *Vitriol* is much used by several Artists. Some Persons carry it about them for Blotches in their Face.

This, as well as the *Roman*, is used for the sympathetic Powder.

Of German Vitriol, or Copperas.

The *German Copperas* is a *Vitriol* of a bluish Green, clear and transparent, which is made and crystallized at *Gosselar* in *Saxony*, whence it is that this *Vitriol* is called *Gosselar*, or *Saxon Vitriol*. The largest Pieces, clearest, and most transparent, are to be chosen, and the driest that can be.

The *German Vitriol* is of much use in Medicine, as being that from whence the Chymists

draw most of their Preparations, as shall be shewn hereafter. It is also this Kind which is used in making *Aqua fortis*. It is likewise used by the Dyers. This may be used for stopping Blood in Case of Necessity, instead of the *Vitriol* of *Cyprus*, but it has not so much Efficacy.

Of White Vitriol.

The *White Vitriol* which we fetch from *Germany*, is the Copperas of *Gosselar*, beforementioned, calcined to Whiteness, and afterwards put into Water and filtered, and reduced to Salt; and when it begins to coagulate, the *Germans* make it into Lumps of forty or fifty Pound Weight, of the Shape we see them in. It is therefore an Abuse put upon us by a modern Author, who would make us believe that the white Copperas is found near Fountains, and is the most purified of all from any metallick Substance. This Copperas ought to be pretty hard, white, and of the nearest Resemblance to fine white Sugar that can be. Care must be taken to keep it from the Air, for when that gets to it, it becomes yellow and unsaleable.

This Copperas is of some Use in Physick: People put it into Rose or Plantain Water, with Orice and Succotrine Aloes, to cure Diseases of the Eyes. Painters use it, when calcined, to put in their Colours that they may dry; but Farriers use the greatest Quantities of it.

By Help of the Spirit of *Vitriol* they draw Crystals from this white Copperas, which are what we call *Gilla Vitrioli*, or emetick *Vitriol*, because being taken from twelve Grains to a Drachm in Broth, or other Liquor, it gives an easy Vomit. An aperitive Mineral Water may be made by dissolving ten Grains of this *Gilla Vitrioli* in ten Pints of River Water.

Of the Spirit, Salt, and Oil of Vitriol.

They draw from the *German* or *English* *Vitriol*, calcined to a Whiteness, by means of Fire and a Retort, a Phlegm, a Spirit, and an Oil; but because the Operation is long and troublesome, I should not advise any one to concern themselves with it: Besides, the Spirit and Oil of *Vitriol*, which we Apothecaries and Chymists in *France* make, is not near so good, nor can be afforded so cheap as those brought from *England* and *Holland*. This must be taken Notice of, that what we call Oil of *Vitriol*, is only a Spirit well rectified from its Phlegm, and not an Oil; for Oils are fat Substances, and will swim on Water, but the Oil of *Vitriol* is not such, but easily intermixes with watry Liquors.

That which is called *Spirit of Vitriol* is the Liquor which comes immediately after the Phlegm, which.

which, if right, ought to be as clear as Water, of a Taste something sharp, and being put upon white Paper, and held to the Fire, become black. They use this Spirit of Vitriol very commonly in Physick for Cooling, and upon other Occasions. The Spirit of Vitriol, well cleaned of its Phlegm, is what we improperly call *Oil of Vitriol*; it ought to be of a dark Colour, of so piercing and caustick a Taste, that it is impossible to endure it upon the Tongue. They are in the wrong who think that acid Spirits need not be stopt, because they pretend that they do not evaporate, which is true; but this Spirit being thoroughly divested of its Phlegm, if you leave it in a Bottle unstopped, the Air gets into it, increases its Bulk and Weight, and at last becomes as insipid as Water.

The Oil of *Vitriol* is very corrosive, and therefore made use of to dissolve Metals: It is taken inwardly for the same Distempers as the Spirit, but must be used in lesser Quantities, because it has greater Strength in it. Spirit of Vitriol should be bought of such Persons as one can trust, because there are some who make Spirit of Vitriol, by mixing *Aqua fortis* with Water, which they are able to afford at a cheap Rate; and this Spirit of Vitriol, made with *Aqua fortis*, is called the *Philosophick Spirit of Vitriol*, of which you must carefully beware.

As to the Water and Phlegm of Vitriol, which I mentioned before, it is of no Use because it is insipid, yet some People wash their Eyes with it.

Monfieur *Lemery* says, that you must use *English Vitriol*, or *Copperas*, for the forementioned Operations, because it is not of such Acrimony as the *German*: However all they who work with Vitriol make use of the *German*; but I leave the Decision of this Point to them that have more Experience in it than I have. That which remains in the Retort, after Distillation, is a reddish Earth which the Chymists call the *Caput Mortuum* of Vitriol, artificial *Colcothar*, or rubified Vitriol. One may draw a Salt out of it by the Means of Water and Fire, which is what they call *Salt of Vitriol*, and is made use of as *Gilla Vitrioli*, only not to be taken in such large Doses. The Salt of Vitriol ought to be white, and faithfully prepared; it is a common Deceit to sell the *Gilla Vitrioli*, or green Vitriol calcined to a Whiteness, for the Salt of Vitriol.

The *Colcothar* has some little Use in Medicine, forasmuch as some People employ it instead of *Chalcitis*, because it is cheaper, and has the same Qualities. Some Apothecaries put *Colcothar* into their *Diapalma*, as well to make it red, as to humour the Surgeons, who are pleased that the Publick do not know that it is nothing but *Dia-*

palma; and to disguise it the better, they call the Plaister by the Name of *Diachalciteos*.

They make with the *Colcothar*, burnt Alum, Sugar-candy, Urine, and Rose-water, a very astringent Water, and proper for stopping of Blood, as Monsieur *Lemery* has observed, to whom the Reader may have Recourse. There is also another styptick Water of Monsieur *Faveur*, described by Monsieur *Charas*.

It is to be observed, that the *Colcothar* is improperly called *Calcanthum*, because the Word *Calcanthum* signifies nothing else but Vitriol.

Vitriol is a mineral Salt drawn, as Salt-petre, by Lotion, by Filtration, by Evaporation and Crystallization, from a Sort of Marcasite, called *Pyrites* or Fire-Stone, of which I shall speak in its Place. It is found in the Mines in several Parts of *Europe*, as in *Italy* and *Germany*: There are some Sorts also found about *Paris*.

This Fossil or Mineral, consists of an acid Salt, Earth, Iron, and Copper. The distinguishing Mark of Vitriol consists in the black Colour, which it communicates to an Infusion of Galls. That it is an acid Salt appears plainly, not only by its being chymically analyzed (for a great many cavil, that an acid Spirit may be produced by the Violence and Force of the Fire) but also from the bright red Colour that a Solution of Vitriol imparts to blue Paper. The Earth of Vitriol precipitates or falls to the Bottom of the Crucible, when the Solution of fixed Nitre is poured upon a Solution of Vitriol. As to Iron and Copper, it is not to be doubted that they are contained in Vitriol; for by pouring the Spirit of Salt, or Vitriol, upon the Filings of Iron, an excellent Vitriol of *Mars* or Iron is made, and by placing Plates of Iron or Copper in a Crucible, with some common Brimstone interspersed, a Vitriol is produced by the Help of Fire: Wherefore it is very probable that the Vitriol of *Mars*, or Iron, and the Vitriol of *Venus*, or Copper, are bred in the Bowels of the Earth, from the acid Juices or Liquors corroding the Copper.

White Vitriol, vulgarly called *Eye Copperas*, is a Mineral Vitriolick Salt, found in the Earth near unto Fountains, and the most of all depurated from a metallick Mixture; or it is made by dissolving the *Roman* or dark Green Vitriol in Water, and then boiling it till all the Water is evaporated, and the Vitriol turned into large white Lumps like Sugar, which being exposed to the Air, turn outwardly of a reddish or yellowish Colour. It is the least acrid of any of the Vitriols.

It is to be chosen in large white Lumps, pure and clean, resembling Loaf Sugar, of a sweet Taste,

Taste, astringent, accompanied with an Acrimony. It contains abundance of Phlegm and acid Salt, a little Sulphur like common Sulphur, and some Earth.

The white natural Vitriol needs no Manner of Preparation, being of great Use and Force in a Looseness and Bloody Flux, and frequently used for that Purpose in Camps and Hospitals. The other White Vitriol is thus purified: Take White Vitriol, what Quantity you please, dissolve it in Phlegm of Vitriol, or in Rain Water; then filtrate, evaporate, and set it to crystallize. This is that which is called *Gilla Vitrioli*, and *Gilla Theophrasti*.

It heats, desiccates, astringes, or constipates, yet excites Vomiting. It powerfully extricates tough Phlegm out of the Ventricle, by its emetick Force, yet may be given to Children. It kills Worms, and strengthens the Stomach and Brain, and is good against Convulsions and Epilepsies; it cleanses and strengthens the Womb, and is used in Injections against a *Gonorrhœa*, and the Whites in Women, a Drachm thereof being mixed with a Pint of Spring Water, and so used with a Syringe. Inwardly, as a Vomit, it is an excellent Remedy against Fevers; Dose from twelve Grains to a Grachm in Broth, or other Liquor. It cleanses the Stomach from all Impurities, eases the Head-ach, stops Fluxes, and is good against *Quotidian* and *Tertian* Agues.

There are two Things observable in Regard to this *Gilla Vitrioli*, First, That in making it all the Liquor may be evaporated away without any Crystallization, so the *Gilla* will remain at the Bottom in a white Powder. Next, that after taking this Vomit, the Sick sometimes voids by Stool a black Matter, like Ink; because it often happens that some Part of the *Gilla* descending into the Guts, meets with a styptick Matter, almost of the same Nature as Galls, which causes that Blackness.

The sympathetick Powder is white Vitriol opened and prepared; it ought to be placed upon a Stone, so as to receive the Beams of the Sun reflexively, from a large Burning-glass, by which it will be sooner done than by any Furnace whatsoever, and the calcined Powder is to be kept in a Glass close stoppt for Use. It is used in the magnetick Cure of Wounds. Dissolved in Water, and used outwardly, it dries, binds, and heats much, and has the Virtue of the *Gilla*.

The *Aqua Styptica Composita*, or the Compound Styptick Water, is made of this Vitriol, and other Ingredients in the following Manner. Take purified white Vitriol, Roch Alum, of each an Ounce; *Saccharum Saturni*, half an Ounce; Spring Water, two Quarts; mix and dissolve over

a gentle Heat, digest close stoppt ten Days; decant the clear, filtrate, and keep it for Use. This is an easy Preparation, and of few and simple Ingredients, but of no mean Use. It is a good Injection (Universals being first premised) against the Whites in Women, and the *Gonorrhœa* in Men, though of never so long standing, and possibly may do more in two, three, or four Days Time, being injected, than all other Medicines could do in as many Years: It stops Bleeding in any Part, heals Ulcers, and infallibly cures all Sorts of Tethers, Ringworms, Scabs, Scurf, Morpew, and inveterate *Herpes* in any Part of the Body, if daily washed therewith, two or three Times a Day, for half an Hour at a Time, and as hot as can be endured; injected as a Clyster, it kills the Worms called *Ascarides*.

There are several Sorts of Green Vitriol, as the *German* or *Hungarian* Vitriol, the *English* Vitriol, and the *Roman* Vitriol.

As for the Green *Hungarian* Vitriol, the Native is found in Mines like Copper. The Factitious is made of the Marcasite, called *Pyrites* or the Fire-Stone, with or without Additions of Copper, and is brought to us from *Dantzick*, out of *Germany*, *Hungary*, &c. The best is the greenish, and of that, that which participates more of Copper than of Iron, which rubbed on a Knife, colours it red; that which is subceruleous, pale, aquose, and moistens the Hands, is not so good.

The Factitious is that which is made either of Water coming from vitriolick Springs, evaporated and crystallized, or else made from vitriolick Marcasites, the *Pyrites*, or Fire-Stone (with Additions of Copper) which is found in Grounds abounding with metallick Seeds, and inclined naturally to the Generation of Sulphur. It is known by burning, for it yields a sulphureous Fume, not unlike Brimstone. This powdered and exposed to the Air, yields on its Superficies a little white and sharp Salt melting in the Mouth, at first sweetish, then ending in a vitriolick Harshness. From this Powder Vitriol is thus extracted; it is dissolved in Rain Water, by boiling in a slow Heat, then filtrated, evaporated, and crystallized; so you have an excellent greenish Vitriol.

Out of any of these three Kinds of greenish Vitriols, all the great and famed Medicines are made. It goes sometimes by the Name of *Dantzick* Vitriol; it may be purified after the same Manner as the white, and the *Gilla* of it has all the Virtues as the other, but is much stronger, and ought to be given with Caution and Discretion, and only to strong Persons; and if given to the Sick, they ought to be provoked to vomit, lest it should ulcerate the Tunicles of the Stomach and Bowels.

The sympathetick Powder is much better to be made with this than with white Vitriol, as being much more powerful to all the same Intentions of curing Wounds, and the like : And as to the Compound Styptick Water of white Vitriol, the same may be done with the *Hungarian*, only the Proportion of it must be something less. It is superior in Virtue, and may do Wonders, if in a wise Man's Hand ; but for vulgar Use the former is better, because it may be trusted with Persons that are less skilful, and there will be no Danger of their doing Mischief with it.

The Styptick Water of Monsieur *Faveur* is made after this Manner : Take of Vitriol twenty-five Pounds, dissolve it in fair Water, strain it through a coarse Cloth, boil it in a Copper Vessel for a Quarter of an Hour ; remove it from the Fire, and put to it immediately half a Pound of Spirit of Vinegar to cause the earthy Parts to settle ; let it stand twelve or fourteen Hours, that the *Terra* may precipitate, then decant the clear Liquor. This *Terra* or Precipitate wash well, dulcify, and dry over hot Embers ; of which take eight Ounces, put it into a Glass Retort, upon which pour Spirit of Vitriol, well rectified from its Phlegm, eight Ounces ; distil with a gradual Fire, soft at first, and at length very violent, continuing it so till nothing more will come. Take the *Caput Mortuum*, reduce it to Powder, and with Alcohol, or tartarized Spirit of Wine, enough to cover it five Inches over, in a Matrafs well luted. Set it in a soft Heat to digest for twenty-four Hours, till the Spirit of Wine becomes very red ; filtre it hot, and draw off the Spirit in a Glass Alembick, so you have at the Bottom a whitish Powder : Take of this Powder one Ounce ; Rain Water four Ounces, digest in the Sun for some Days, then filtre and keep it for Use : But the same Person, in making the same Water, did sometimes put double the above limited Quantity of Spirit of Vitriol, and then only drying the *Caput Mortuum* in a Crucible till it became yellowish, he to two Ounces of it put only three Ounces of Rain Water ; digested them together for some Hours, then filtrated, and kept the Liquor close stoppt for Use, as an extraordinary Remedy against all Hemorrhages, or violent Fluxes of Blood.

To conclude, the *German* or *Dantzick* Vitriol is in green Crystals, inclining to a blue, of an astringent acrid Taste ; it participates of Copper, and is that which is used to make *Aqua fortis*.

The *English* Copperas is in Crystals of a dark green Colour, of a sweet astringent Taste, coming near to that of white Vitriol : It participates of Iron, and does not make it change its Colour. It is more than half of it Phlegm, a great deal of

acid Salt, Sulphur, and Earth. One may draw from this Vitriol a very good Spirit of Vitriol by Distillation, as I have shewn in my Book of Chymistry.

This Vitriol is made in *England*, upon the River of *Thames*, from vast Quantities of the *Marcasite Pyrites*, or Fire-Stone, with the Addition of old Iron. Of this Copperas, with Galls, or any other astringent Vegetables, you may make Ink, and the Black for Dyers ; yet some think that the Vitriol of Copper is better, because that Experience teaches the Refiners that *Aqua fortis* made with Copperas, or Vitriol of Iron, will carry its Foulness through all their mediate Solutions.

Dark Green, or *Roman* Vitriol, vulgarly called *Common Green Copperas*, is prepared about *Rome* in *Campania*, being extracted out of Clots or Lumps, of an Ash-colour inclining to black, like Potters Clay ; which being exposed to the Air, gradually heat and ferment, and being dissolved some Days after in fair Water, they yield this Sort of Vitriol, but from the fresh Clots no Vitriol can be obtained. The *Roman* Vitriol is also prepared in some Parts of the Kingdom of *Naples* ; it is of a paler Green than the *German Vitriol*, but almost of the same styptick Taste.

The blue Vitriol, or celestial Stone, is called *Cyprian*, or *Hungarian Vitriol*, because it is brought to us from those Countries. It is in Crystals of a very fine sky-coloured Blue. It is not certainly known after what Manner it is made ; some think it is extracted by the Evaporation and Crystallization of the blue Water that is found in the Copper Mines : Others say it is an artificial Operation, performed by a Dissolution of Copper, in a weak Spirit of Vitriol, evaporated and crystallized. However it be, it participates much of the Copper, which gives it the blue Colour. It is acrid and something Caustick ; it comes in great and lesser Pieces ; the little ones are pointed like Diamonds. It contains much acrid Salt, or a corrosive Acid of Sulphur, but less Phlegm and Earth than other Vitriols.

The artificial Vitriol of *Venus* is made by taking little thin Pieces of Brass, about the Bigness of a Shilling ; first put a Layer of Sulphur, then a Layer of Pieces, filling a Pot full, *Stratum super Stratum*, and calcine in a Furnace for two or three Hours ; or calcine first the Copper by itself, and then beating the *Calx* to Powder, calcine it again, having first mixed with every Pound of *Calx* six Ounces of Sulphur, stirring it continually as it burns, that it may not stick to the Pan, and become black. Powder the *Calx* again, and calcine and repeat it three Times, till the *Calx* becomes very red. Take of this red *Calx* in Powder

one Pound; fair Water six Pounds; boil them together for about four Hours; let it cool and settle; decant the clear sapphirine Liquor, and filtrate it after it has stood about two Days. The remaining Copper calcine, as before, with Sulphur three Ounces; and with Water in like Manner draw the Tincture. This Process of calcining, boiling, settling, and filtrating is to be done six or seven Times, till with the Water you have extracted the whole sapphirine, azure, or blue Tincture out of the Copper. These blue filtrated Liquors put together, in a large earthen Bell, in a Sand Heat, not violent; evaporate the Water till a Pellicle arise, which being then put into a cold and moist Place for a Night, will shoot into Crystals like great Gems. *Glauber* extracts the Tincture from calcined Copper, with Spirit of *Sal Armoniack*, by frequent Ignition and Extinction, and in an Hour's Space extracts a blue Colour; which being set to crystallize in a cold Place, shoots into most elegant blue Vitriol. *Beguinus* does it with Spirit of Vinegar; but then the Vitriol will be of an obscure green Colour.

The native blue Stone is good against Diseases of the Eyes, taking away Films, Clouds, Pearls, &c. Rheums, Redness, Inflammation, and Blood-shot, if you take the Stone and put it into a little Spring or Well Water for about two Minutes Time, and then take the Water with a Linen Rag to wash the Eyes, and drop two or three Drops into them at Bed-time. It cureth any running Sore, or Ulcer, or inveterate *Fistula*, Tetters, Ringworms, Scurf, &c. but for these latter Diseases the Stone ought to lie in Water for a Quarter of an Hour. It also helps the Canker in the Mouth, by rubbing the Place with the Stone, and washing the Mouth with the Water.

The factitious blue Stone is given from two or three Grains, to twelve or fifteen, in proper Liquors, against Diseases of the Head, Stomach, and Parts of Generation. It is often used in Injections in proper Vehicles, one Drachm to one Pound of Liquor, for all Sores, Ulcers, Scabs, Itch, Tetters, or any other cutaneous Disease. Inwardly it kills the Worms. It may be given in a small Dose against Diseases of the Stomach and Brain. It strengthens the Brain against a growing Epilepsy. It is also a Specifick to cleanse the Womb; and it is held as a great Secret, to dissolve a little of it in Water, against the burning and intemperate Heat of the spermatick Vessels, and so to use it for Injections: For as this Vitriol possesses a large Portion of the Sulphur of *Venus*, which is able to appease the Irritation of those Parts, so also it produces rare and eminent Effects, by virtue of its deterfiv and refrigerative Salt,

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The red Vitriol, called *Calcanthum*, is a Vitriol that has been naturally calcined in the Mines by subterraneous Fire, or artificially by ordinary Fire. That which is found naturally in the Mine, is called *Chalcitis*, because it is taken from Copper Mines. It is a brownish red Stone, which is brought to us from *Sweden* and *Germany*. It is rare, and we have scarce enough of it to use in our *Venice Treacle*, of which it is one of the Ingredients.

That is best which is of a reddish brown, of the Taste of Vitriol, and easily dissolved in Water.

The *Colcothar*, calcined by the common Fire, is of a pleasant Red. The best is that which remains in the Retorts after the Distillation of the Spirit and Oil of Vitriol. Both the one and the other *Colcothar* contain a great deal of metallick Earth.

Vitriol is chymically analized after the following Manner: Fill a Glass Matrass, or Cucurbit, up to the middle with Vitriol powdered; then clapping on the Head, fitting the Receiver, and luting the Joints, distil it with a Sand Heat, that the *Ros*, or Phlegm of the Vitriol, being of a strong sharp Taste, may be drawn off; then take off what remains in the Matrass, bruise or powder it, and throw into a Retort, increasing the Fire gradually three or four Days, and you will obtain a Spirit and an Oil: And, lastly, from the *Caput Mortuum* of the Vitriol dissolved, an Earth and Salt is obtained.

The *Ros* or Phlegm of Vitriol is prescribed by the Chymists from one Drachm to two, and is mightily commended by them for its Virtues, being diuretick, vulnerary, anodyne, and good to strengthen the Bowels.

The Spirit of Vitriol provokes Urine, excites an Appetite, and allays the burning Heat of Fevers, being given in a Cup full of cold Water, to a grateful Sharpness. This Spirit may be sweetened, digesting it with the rectified Spirit of Wine; and then it may be used in Diseases of the Gums, and cutaneous Distempers.

The Salt of Vitriol is endued with an emetick Faculty. It may be given from half a Drachm to two Drachms.

The *Colcothar*, or red Earth, out of which the Salt was extracted, is effectually used in a Looseness, Bloody Flux, Hemorrhages, and Wounds.

The spiritous Parts of Vitriol may be easily again recovered, if you expose the *Caput Mortuum* for some Time to the open Air, keeping it from Rain; so that by Distillation you may obtain another Spirit: But this Spirit is a great deal sweeter and weaker than the common.

Paracelsus corrects the Spirit of Vitriol by
R
pouring

pouring it upon the *Caput Mortuum*, and then distilling it nine Times over, every Time pouring on more fresh Spirit; and taking it out of the Alembick, he put it into a Retort, and distils it over again with as much Spirit of Wine as is sufficient to make it into a Paste. This he highly commends in an Epilepsy, or Falling Sickness.

[*Vitriols* are either natural or fictitious; the former are found in Crystals, or *Siriaz*, sticking to the Roofs and Sides of Mines; the latter are obtained by various Arts from Waters, Earths, Stones, vitriolick Veins of mineral Ores, and particularly from the *Pyrites*: the most usual Ways of obtaining them are by Fermentation, Coction, and Crystallization. In *Galen's* Time, blue *Vitriol* was made in *Cyprus* by the Sun's exhaling vitriolick Waters; and the same Kind is now made in *Hungary*, by boiling and evaporating a Water of that kind; and the green *Vitriol* of *Germany* is, at this Time, made by a Method not much different. It is also made in some Places by Ablutions of an ash-coloured Earth, spotted with Specks of a Rust of Iron Colour; and others of a Verdigrise Colour, with a strong sulphureous Smell, an unpleasant acerb Taste. This *Vitriol* is therefore composed of a Mixture of Iron and Copper, and accordingly its Colour is between blue and green. The other common *Vitriols* of the Shops are, 1. The blue *Vitriol*, the *Vitriolum Cæruleum*, *Charlt. Foss. 11. Vitriolum Cyprinum Cæruleum*, *Worm. 25. Calcanthum Cyprinum*, *Ald. Mus. Met. 329.* This is brought to us from *Cyprus* and the *East-Indies*, and is made from Copper, or Coppery Waters, by Solution and Crystallization.

2. The green *Vitriol*, or common Copperas, is the *Vitriolum Viride*, *Charlt. Foss. 11. Calcanthum Viride fictitium*, *Atramentum Sutorium Officinarum*, *Schw. 273. Atramentum Viride durum solide coctum. 13.* This is made in *England*, principally at *Rotherhithe* and *Deptford*, from a ferrugineous Kind of *Pyrites*, common on the Eastern Shores of *Sheppey Island*, and in other Places, with a Mixture of rusty Pieces of old Iron by Coction and Crystallization. The Copperas Stones are heavy, dense, and of a darker or paler Colour on the Outside; but their inner Surface is marked with Lines or Spangles of a Gold or Silver Colour. They are insipid to the Taste, and by lying long in the open Air, acquire an intestine Fermentation, and fall spontaneously to Pieces.

3. The *White Vitriol* of the Shops, is the *Vitriolum Candidum*, *Charlt. Foss. 11. Calcanthum Candidum*, *Ald. Mus. Met. 339. Atramentum Album durum Fossile*, *Kentm. 13.* It is an Error to think that this is a Preparation of any of the other *Vitriols*, for it is found in proper Mines like a downy

Efflorescence, which is dissolved in Water, is boiled to Evaporation, and formed into Cakes. It is also sometimes found in the Mine in small transparent Pieces like Crystal. This is used as an Emetick, and in Diseases of the Eyes.]

Of the medicinal Stone of Crollius.

The Stone of *Crollius* is made of *Engl. Pomat.* *liff* Copperas, white Vitriol, Allum, white Pot-ashes, or *Natrum* of *Ægypt*, common Salt, Salt of Tartar, Salt of Wormwood, Salt of Mugwort, Salt of Succory, Salt of Plantain, Salt of Arsmart, white Lead, Bole Armoniack, Myrrh, Frankincense, and Vinegar of Roses. Of all these in proper Quantities, as they are set down in *Crollius*, *Pag. 442.* by the means of Fire, is made a red Stone, endued with very excellent Properties, which would be too long to be described in this Place: But as this Stone is of great Consequence, both because it costs a great deal of Money, and because few Persons have the true Knowledge of it, the greatest Part of the Apothecaries substitute in the Room of it the medicinal Stone described by *Monsieur Charas*, because they can afford it cheaper than they who sell the true Stone of *Crollius*; this latter being made of Drugs of a much lower Price, as shall be shewn hereafter.

Of the other medicinal Stone.

Monsieur Charas, in the Page 1041 *Pomat.* of his *Pharmacopœia*, describes a medicinal Stone composed of the Vitriol of *Cyprus*, Salt of Nitre, white Lead, Allum, Bole Armoniack, Sandiver, *Sal Armoniack*, and common Vinegar; so that one may see by these two Descriptions, that there is a great deal of Difference betwixt this Stone and that of *Crollius*: And that more of this is likely to be sold for its Cheapness than of the other.

Of the Lapis Mirabilis.

The *Lapis Mirabilis* is so called because of its great Properties; above all for the Cure of Webs, and other Diseases that happen to the Eyes of Horses.

This Stone is made by putting into an earthen Pot white Copperas, Alum, Bole-Armoniack, Litharge, and common Water, as *Monsieur Solleysel* has remarked in his Book, *Pag. 86.* to which they that have Occasion may have recourse, as well to know the Dose, as those excellent Qualities by which it obtained such a Name.

These, and many other medicinal Stones, have been

been once in great Repute, but are now never prescribed or made.

21. Of the Pyrites, or Fire-Stone.

THE *Pyrites*, or *Fire-Stone*, is a Sort of *Marcasite*, of which they make their *Copperas's* or *Vitriols*. This *Marcasite* is weighty, of a Mouse Colour, full of little, yellow, shining Spots.

There is a great Quantity of this *Fire-Stone* in *France*, especially at *Passy* near *Paris*.

It is no Impropriety to call the *Vitriols* *Copperas's*, because the Word *Copperas* is derived from *Cuprum*, Copper.

Pyrites is a Sort of *Marcasite*, or *Lemery*. hard Stone, heavy, which sends forth Sparks of Fire upon striking it with Iron, of a grey Colour, interspersed with little, yellow, shining Streaks: This Kind is found in the Copper Mines in *Italy*, from whence they draw the *Roman* *Vitriol*.

To get the *Vitriol* out of this Stone, it is necessary to expose it to the Air for several Months together, that so the Acid getting insensibly into the Pores, may rarefy its Parts, and render its Salt more dissolvable. By Time it is converted in a Manner to a Calx, from whence they extract the *Vitriol*, by washing it several Times with Water, and making Evaporations and CrySTALLIZATIONS as are necessary, as they do in the making of Salt-petre.

The *Pyrites* is deterfive, astringent, desiccative, digestive, resolute, applied outwardly.

[*Pyrites*, or *Marcasites*, are of various Kinds, found in almost all Mines and Pits, and partaking of various Metals, Salts, and Sulphurs; according to the Quantities of which that are contained in them they vary in Shape, Colour, Size, and Weight. It would be not only tedious, but improper to enter into a long Detail of them here, as none of them are now ever used in Medicine in their natural State.]

22. Of Lead Ore.

Pomet. **L**EAD is a livid, terrestrial, heavy Metal, charged with Sulphur, naturally soft and malleable, very like Tin, but inferior in Goodness. The Chymists call it *Saturn*, because of the Influences they suppose it receives from that Planet.

We have three Sorts of *Lead Ore* that differ one from the other, only according to the Digestion they have received in the Bowels of the Earth. The first, that is to say, that which has received the least Heat, and by Consequence is most weighty, is that

which has the Name of common *Lead Ore*, and this is what is made into the Lumps called *Pigs*.

This *Lead Ore* is a weighty Mineral, easy to break to Powder, and difficult to melt: it is taken out of the Mine in Pieces of different Bigness; sometimes clean and neat; sometimes mixt with Stones, resembling a certain Sort of Marble.

This *Lead Ore* being broken, parts into shining Flakes, of a white enclining to black, very like the Shoots of Antimony.

The *English* melt this Lead, and afterwards cast it into Moulds of the Shape we see the *Pigs* in. The *Lead Ore* is of no other Use in *France* but for the Potters, who make use of it, having first reduced it to Powder, to varnish the earthen Vessels of a green Colour with it.

Although this Merchandize be of no great Consequence, yet great Care must be taken concerning it; for if there should chance to be any other Metal in it, as there is found to be too often, it will spoil all the Potters Ware, to the great Trouble of him that sold the Commodity; for this Reason you should never sell it to the Potters, without shewing it them Piece by Piece, and taking a Note under their Hand, that they are satisfied, to avoid further Trouble.

This *Lead Ore*, to have the requisite Qualities, ought to be in large Pieces, heavy, with fine shining Scales, fat, that is to say, soft in handling, in a word, the most approaching to Bismuth that it can possibly; reject that which is full of Stones and Dirt, or Gravel, as good for nothing, as well as that which is mixt with the *Lead Ore* of the second Sort that I am going to speak of.

The second Sort is a *Lead Ore* less weighty and much harder than that beforementioned, and being broken is of a Mouse Colour, of a coarser Grain, smooth without, in some Measure resembling the black Lead; which shews that it has not received Heat enough to be converted into the black *Lead Ore*. This is to be entirely rejected, as being of no Use: And some of this is often found in the first Sort, which is what causes so much Trouble to the Workmen, because they can no more melt it by the Fire than they can do Marble, and it spoils all their Work. However, I must take notice, that some Alchymists enquire after it to draw their Lead out of it; for they pretend that the Lead drawn from it is more ductile and close than common Lead is found to be. Others will have it, that there is some Silver in it, which I leave other Persons to try; but as it is seldom used, I should not advise any Person to furnish himself with any Store of it.

The third Sort of *Lead Ore* is very much used, and is that we call *Black Lead*, or *Crayon*, because

the most perfect. It serves to make Pencils to design withal. The Antients gave it the Name of *Plumbago*, and of Sea Lead, because they thought it was taken from the Bottom of the Sea. Foreigners call it *Potelot*.

We have at *Paris* two Sorts of Black Lead, to wit, the fine and the common. The Fine, to be perfect, and in good Condition, should not be heavy, of a black shining Silver Colour, not too hard nor too soft, easy to be cut, and, when divided, compact in the Inside, and not gritty; of a fine close Grain, in moderate Pieces, rather long, proper to cut; that which is fit to make the long Pencils is most esteemed. Lead of these Qualities wants for no Price, the Merchant may have what he pleases, being much sought for by Architects and other Persons for drawing. This Sort of Lead comes generally from *England*; but as for the common, it is brought from *Holland*, and is of no great Use.

Monfieur *Morin*, Physician and Mineralist, has assured me that there were a great many Lead Mines in *France*, especially in *Auvergne*, from whence we might have these three Sorts of Lead; and this may be relied upon, he being a Person that would not affirm an Untruth.

Of Lead in Pigs.

What they call Lead in Pigs, is the common Lead Ore, melted and purified from the Stone and other Impurities; which being well refined, by scumming, and throwing Suet or other Grease into it, is cast into Moulds to make Pigs of different Sizes.

The Lead so refined, to have its due Requisites, should be soft, that is to say, easy to cut, pliant, and the most white and shining that can be. The different Uses that are made of Lead, as well in several Trades, as in chymical Operations, is the Reason of so large a Consumption as there is of it, as well in *Europe* as other Parts of the World.

Of Lead in Powder.

The first Preparation that is made of Lead, is the reducing it to Powder; not in the manner some Apothecaries use to reduce it, by rasping it, and beating it in a Mortar; nor as some Authors teach, by pouring it, when melted, into a round wooden Box chalked within, and so shaking it to Powder; for this is a troublesome tedious Way, and the Quantity obtained by it is so little, that it is not worth while; but by melting Lead in an Earthen or Iron Vessel, and when it is melted, by throwing into it the Dust of beaten Charcoal,

stirring it about: And in this Manner you may sooner reduce into Powder a thousand Weight of Lead, than one Ounce in a Mortar. To clean the Lead, that is, to separate the Coal from it, you have nothing to do but to wash it in Water, and dry it. Lead in Powder is very little used but by the Potters, who use it as Lead Ore for glazing their Earthen Ware.

Lead in Powder, especially that which is in a Powder almost impalpable, has some Use in Medicine, because it is an Ingredient in some Ointments, as the *Pompholyx* and others. They who refine Lead, and make Musquet Bullets, or small Shot, send us their Scum, which we sell to the Potters, and call Scum, or Lead Ashes.

Of Burnt Lead.

Burnt Lead, which the *Latins* call *Plumbum Ustum*, is Plates of Pig Lead put into a Pot with Sulphur, and by the Fire the Lead is reduced to a brown Powder.

Burnt Lead has some Use in Medicine, because it dries, and is an Ingredient in some Ointments and Plaisters. As to its Choice, there is no more to be said than that it be clean and well burnt. Some wash it, to separate the Impurities, or the Sulphur that remains in it.

Of Red Lead.

The Red Lead, which we call *Minium*, is Lead Ore pulverized, calcined, and reduced to such a red Powder as we see it. It is wrong to think that the Red Lead, which is brought from *England*, is made of the Pig Lead; the Cheapness of it shews it to be otherwise, and that it is made from the Lead Ore as it comes from the Mine; besides, Pig Lead will never come to that Redness as Lead Ore, whatever Fire you give to it.

Minium ought to be chosen for its high Colour, the finest Powder, and the cleanest that can be; and Care must be taken that it has not been washed, which will be known by its whitish Colour, and the little Lumps that are commonly in it. One may draw Mercury from Minium with Lime or File-Dust, but it is in so small Quantity, that it is scarce worth speaking of.

The Red Lead is of some Use in Medicine, because it is drying, and gives a Body to some Ointments and Plaisters. Painters use it as well for painting red, as to mix with other Colours, to make them dry. Potters use a great deal to glaze their Ware of a reddish Colour, and there are several other Tradesmen that have Occasion for it.

Minium

Minium is the Lead Ore pulverized, and made red by a long Calcination over the Fire: this is brought from *England*, whereof that of the highest Colour ought to be chosen. It is astringent and desiccative, being used in Plaisters and Ointments. They likewise use it in Painting, and to varnish Pots of a red Colour. It is called *Minium* from the Word *Mina*, because it is made of the Lead as it comes from the Mine.

Of Ceruse.

Pomet. *Ceruse*, or Calx of Lead, is only Lead reduced to a Calx by means of Vinegar, the Vapour of which it is made to receive, and afterwards ground with Water, and put into Moulds, and so made up into little Cakes, which they dry, and put into blue Paper, as we find them. This *Ceruse*, so prepared, is that which one may truly call the Calx of Lead, and not that which we sell at present, that comes from *Holland* or *England*, it being almost all common Chalk, as I am going to relate.

The true *Ceruse* is that which we call the *Venetian*, because the *Venetians* were the first that made it; but as it is extremely dear, we have little but the other Sort, which comes from *Holland*, because the Painters esteem it as much as the *Venetian*, but they are very much in the wrong; for the *Dutch Ceruse* ground with Oil or Water, is a White of no long Duration, because of the Chalk that is in it, which does not happen to the true *Venetian Ceruse*, which is only the White Lead ground; so that if one had the true *Venetian Ceruse*, there would be no need of grinding White Lead, and consequently the Dangers would be avoided that Persons meet with by grinding it, which often occasions several Diseases, and sometimes Death itself.

If they who have Occasion for *Ceruse* to use in Medicine, or to make Salt of *Saturn*, would use the true *Venetian Ceruse*, they would find their Operations more perfect: And instead of taking the *Ceruse* in Cake, they might take the White Lead ground, and make it serve all their Purposes; but then it must be bought of honest Persons, for none but they who ground it can answer for it: However, the true White Lead is extremely white, soft, and friable.

It is to be remarked, that the *Hollanders*, to make their *Ceruse*, use only the Dust that comes in bruising their White Lead; and as this Dust could not supply so great a Quantity of *Ceruse* as is used in *France*, and other Countries, and they could not afford it so cheap as it is always sold,

they mix a sort of Marle or white Chalk with it. As for that which comes from *England*, it is still worse than that from *Holland*, because they mix more of that Chalk with it, and it is not of so good a Colour. They who grind the White Lead to make *Ceruse* of it, have Water-Mills, and afterwards they cast it in little Moulds to form it into Cakes. To have its proper Qualities, it should be extremely white, soft, friable, and dry, and the least broken or mixed with little Dust that can be, especially if it be for Sale. You should reject that which has not a good Body, but cracks in handling it, which proceeds from its being put up before it was well dried, or having been damaged by some wet coming to it.

Cerusa, or *Ceruse*, is a Lead that is penetrated, rarefied, and half dissolved *Lemery*, by the Vapour of Vinegar, and reduced into a very white Substance that is heavy and friable. When you would make this *Ceruse*, the Lead is to be beat into fine thin Plates, which are suspended or hung over earthen Pots, in which they have put Vinegar; and when the Pots are full of this Lead, they place it in a proper Heat, so that the Vinegar may, by its Fume or Vapour, have Power to penetrate and attenuate insensibly the Matter. After this has remained about a Month in the Heat, they open the Mouth of the Pot, and find all the Plates of Lead reduced into a white brittle Substance, which they call *White Lead*, and break these Plates into Pieces, which are used by the Painters. This White Lead is ground upon a Porphyry, with a little Water, and made into a Paste or Cakes, which being dried, are fit for Transportation. The Workmen, in this Commodity, chuse to put it up in blue Paper rather than any other, in order to make the *Ceruse* look whiter; the best, the purest, and whitest, is brought from *Venice*. That which comes from *England* and *Holland*, is mixed with a kind of Chalk or Marle.

Of Sandyx, or Red Ceruse.

The *Sandyx* is nothing but *Ceruse* red-dened over a gentle Fire; but this *Sandyx* or *Red Ceruse*, is little used, as it is only a kind of *Minium*. Some Moderns have writ that *Minium*, or Red Lead, was made of *Ceruse* turned red upon the Fire: But there is nothing more false, and they only write by Hear-say, as is easy to prove: Forasmuch as the *Ceruse* comes from *Holland*, and the *Minium* or *Red Lead* from *England*; and besides, the *Ceruse* is always dearer than the *Minium*.

Of Masticot.

Pomet. There are three Sorts of *Masticot* that are brought from *Holland*, to wit, the White, the Yellow, and the Gold-coloured. These different Colours arise from nothing but the different Degrees of the Fire they give the Powder of White Lead, of which they are made. Though the first Sort, which is that which has sustained the least Degree of Fire, is called White, yet it is not of a true white Colour, but of a whitish Yellow. The second is yellow, and endures a stronger Degree: and the third of a Gold Colour, and has sustained more Fire than the former; and they might make a fourth, by calcining it till becomes red, which makes it a true *Sandyx*. As to the Choice of them, they ought to be heavy, in an impalpable Powder, of a high Colour; they are only serviceable for the Painters; though *Lemery* says they are desiccative and useful, mixed in Plaisters or Ointments.

Of Natural and Artificial Litharge.

The *Natural Litharge*, which the Ancients called by the Name of *Molybdæna*, is a Kind of metallick or mineral Body, in Crusts or Flakes, of the Thickness and Figure of White Lead, of a reddish Colour, easy to break, which is found in the Lead Mines. But as this *Litharge* is known to very few People, and is scarce to be met with, the *Artificial Litharge* only is used, which is improperly called Gold or Silver *Litharge*, because the Ancients, and after them the Moderns, pretend that this *Litharge* was got from the Lead that had served to purify or refine Gold and Silver; which is far from Truth, since all the *Litharge* we have now from *Poland*, *England*, or other Parts, as *Germany*, *Sweden*, and *Denmark*, is from the Lead made use of in refining Copper. Nevertheless, I do not deny but that those who refine Gold and Silver make *Litharge*; but that is not what is sold, because the Refiners melt theirs into Lead again to serve anew, and to recover the Gold or Silver that was carried off with it. Our *Litharge*, therefore, ought not to be called *Litharge* of Gold or Silver, but plainly *Litharge*. They ought also to be undeceived, who believe, according to what some Moderns have writ, that *Litharge* is the Fume of Lead evaporated in the refining of Gold and Silver, and that it is like Soot, and sticks to the Chimney: So also these should be undeceived who believe that there is any Difference in the *Litharges* from their Colours, since those are only occasioned by the Force or Violence of the Fire.

The *Dantzick Lithargé* is to be preferred before the *English*; so likewise that which is smallest, most calcined, and of a lively Colour, that will easily dissolve in any unctuous Liquor, in which it is usually employed. This Commodity is much used in *France*, as well by Potters to glaze their Earthen Wares, Dyers, Painters, and others, as by Apothecaries, who make it the Basis of most Part of their Plaisters and Ointments.

Lithargyrus, five *Lithargyrium*, or *Litharge*, is a Lead tinged with the Impurities of Copper, and reduced into the Form of Dross, or metallick Scum, by Calcination. This is made upon the Purification of Copper in *Poland*, *Sweden*, and *Denmark*. There are two Sorts, one called *Lythargyrium Auri*, seu *Chrystitis*, or *Litharge of Gold*; the other *Lythargyrium Argenti*, or *Litharge of Silver*. The Difference of Colours makes no Difference in the Virtue of them. There is likewise a *Litharge* made in Refining Gold or Silver by the Cupel, but it is but in small Quantities, though like the other. All the Sorts are desiccative, cooling, deterfive, and give a Consistence to several Plaisters, for they dissolve in boiling with Oil and fatty Bodies.

Of Salt, or Sugar of Lead.

The *Salt*, or *Sugar of Lead*, is made *Pomet.* of White Lead, or the true *Venetian Ceruse*, infused in distilled Vinegar, then filtrated, evaporated, and reduced into a light Mass, that is white and crystallized, of a sweet sugary Taste, yet nevertheless very disagreeable. The greatest Part of those who make Salt of Lead, do it with *Dutch Ceruse*, such as we sell, for which Reason they can sell it nothing near so cheap as that made of *Venetian Ceruse*; because, as I said before, the *Dutch* is mixed with Chalk, which will yield no Salt; some make it of Lead in Powder, *Minium*, or *Litharge*; none of which will afford so much Salt, and consequently what is made that way cannot be sold so cheap. Chuse that which is of the Taste aforesaid, white, in little Shoots, or shining Crystals, and as light as may be, which when dissolved in Plantain Water, will look like Whey; which Trial will answer two Purposes, the one to know the Goodness of the Salt of Lead, and the other that of the Plantain Water. Its Use is to cool, being given internally, or used externally. It is reckoned proper to stop the Flux of the Belly, and for sore Throats, taken from three to four Grains in Plantain Water. Most of those who make this Medicine make it heavy and greyish coloured, which proceeds from its not being

ing well purified, or that it was not made with good Vinegar. For to make the Salt fine and light, it ought to be purified at least four Times.

Of Balsam, or Oil of Lead.

Balsam, or *Oil of Lead*, is made of the Salt dissolved in Oil of Turpentine; others put Salt of Lead in a Cellar to run into a Liquor. The first Balsam or Oil ought to be preferred to the other, in that it is proper to cleanse and cicatrize Ulcers, and because it is more capable of resisting Putrefaction. Others make Oil of Lead, and Burning Spirit of Lead, which they make by filling two Parts of a Retort with Salt of Lead, and by the Means of Fire, drawing thence a Spirit that burns like Brandy. But this Oil is not so strong as that made with Oil of Turpentine, it serves to cleanse the Eyes, especially of Horses and other Beasts. Spirit of Lead is an excellent Remedy to resist the Putrefaction of Humours.

Of Magistery of Lead.

Magistery of Lead is made of good Salt of Lead dissolved in distilled Vinegar mixed with common Water; and by the Assistance of Oil of Tartar *per Deliquium*, precipitated into a white Powder, which after it is washed and dried, is very useful to cure Tetters and Ringworms, being mixed with Pomatum. The Vinegar and Water impregnated with the Salt before the Precipitation, if put into Water, make also a Sort of Virgins Milk, that is good to allay Inflammations, and cure Pimples in the Face.

Of Vinegar of Lead.

The *Vinegar of Lead* is a distilled Vinegar, wherein have been digested Ceruse and other Preparations of Lead. It is made use of to cure Tetters, or being well incorporated with Oil of Roses, to make a kind of Ointment, called *Butter of Lead*.

[*Lead* is got from different Ores, some mixed with a black, yellow, or ash-coloured Earth, some full of Spangles, others of a red or white rocky Stone, in which the shining *Lead* is seen in square Cheques, and in others of white, red, or green Spars. *Lead Ore* almost always contains some small Quantity of Silver. There are *Lead Mines* in *Spain*, *Italy*, *Germany*, and *France*; but the richest in *Europe* are in *England*, where they separate the Metal from the Ore by stratifying it with Charcoal, which, when lighted, melts the Metal, which immediately runs

out. The specifick Gravity of *Lead* is to that of Gold as three to five. Exposed to the Focus of a Burning-glass, it melts, emits copious Fumes, and then turns to an ash-coloured Calx, which soon turns yellow, then red, and soon afterwards melts into a Saffron-coloured, very fluid Liquor, which afterwards soon vanishes in Smoak; but if it be removed before it evaporates, it hardens into a red or yellowish Mass like Orpiment, consisting of thin *Laminæ* pellucid like Talc. If this be put in the Focus again on a Piece of Charcoal, it recovers the Form of *Lead*, but if a bit of pure *Lead* be put on a Charcoal in the Focus, it melts, and is dissipated in Smoak, no Glass remaining. *Lead* therefore is composed of a vitrifiable Earth of the talcous Kind, and a sulphureous Principle, not much in Quantity, nor intimately mixed with it. It never contracts Rust, and is soluble in Acids or Oily Substances. In Calcination it gains in Weight, so that an hundred Pounds of *Lead* will yield an hundred and ten Pounds of *Minium*, but if that be again reduced to *Lead*, it will not weigh near an hundred.

Minium, *Masticot*, and the Calx of *Lead*, are prepared by the same Operation, only differing in degree: To make them, melt *Lead* in an unglazed earthen Vessel over a Charcoal Fire, it will after some time turn to a greyish Powder; this is the Calx of *Lead*; continue the Fire, and this Powder soon afterwards becomes yellow, then it is *Masticot*; calcine this in a very strong Fire, and it becomes red, and is then *Minium*, or red *Lead*. And this *Minium* is better and purer than that made at the Mines of the unpurified Ore.

The *Molybdæna*, or *Plumbago*, is a Substance of the Litharge Kind, sticking to the Furnaces where Silver and Gold are purified by *Lead*; the Upper Part of it is like the common Litharge; the Lower, of an ashy Substance; and the Middle, a Mixture of both the others. Its Virtues are the same with those of the Litharge, but it is seldom kept in the Shops.

Black *Lead* is the *Nigrica Fabrilis*, *Charlt. Foss.*
2. *Massa Nigra ad Puigitem referenda*, *Worm.*
5. It is rather an Earth than a Metal: It is found in Pieces of various Shape and Bigness. The best Kind of it is that found in *England*, about *Keswick* in *Cumberland*: The *West-Indian* also is fine. The *Spanish* is the next to this, but is more brittle: That of the *East-Indies* is the worst of all. Beside its great Use to Artificers, it is in Medicine drying, cooling, and repellant.

The Preparations of *Lead* are very great Medicines, but those intended for internal Use must not be meddled with, but by those who have Judgment.]

Of Natural or Mineral Zinck.

It is not with *Zinck* as with Tin-glass; forasmuch as it is not only probable, but certain, that there is a *Natural Zinck* which the *Germans* call *Beauter*, and the *Flemings*, *Speauter*, we *Spelter*. The *Mineral Zinck*, is found in great Quantities in the Mines of *Gosselar* in *Saxony*; it is at present very scarce in *France*, for which Reason it is much enquired for by some People. This Metal appears to be a kind of Lead Ore, except that it is harder, whiter, and more brilliant. Some People have assured me, that the *Zinck* we sell in great square Cakes is *Mineral Zinck*, that after it has been fined, is thrown into Moulds of the Figure we have it; which I can easily believe, having found it impossible to make it of Lead, Arsenick, Tartar, and Salt-petre, as Mr. *Charas* has directed. *Zinck*, which some improperly call the Female Antimony, ought to be white, in fine Flakes, the least sharp, and the most difficult to break that can be: For the more it endures the Fire, and the finer and larger the Flakes are, the more it is valued by the Workmen that use it, especially the Founders.

The *Zinck* at this Time is much in Use, for the Pewterers have found it more proper to cleanse their Pewter, than Pin-Dust and Resin. It is wrong to believe that *Zinck* is mixt with Pewter to encrease its Weight; for unto a Fount of five or six hundred Pounds of it, they put but one Pound of *Zinck*; and which is wonderful, the *Zinck* has the Quality of purifying and whitening

the Pewter, and acting upon it as Lead does upon Gold, Silver, or Copper. This *Zinck* is used to give Copper the Colour of Gold, especially when mixed with Turmeric; and works upon Copper as Arsenick does, that turns it of a Silver Colour; or the *Lapis Calaminaris*, that makes it yellowish; or, lastly, as *Hungarian Vitriol*, that turns Iron into a Copper Colour, as hath been observed in the *Philosophical Transactions* of the Royal Society at *London*.

[*Zinck*, called *Zinchum*, *Zinethum*, and *Marcafita Pallida*, by *Schroder*, is a metallick, sulphureous, heavy Substance, resembling Lead in Colour, fusible and ductile to a certain Degree, very hard to break, inflammable, and volatile. It seems to have been quite unknown to the Antients; and even the Moderns knew very little of its Nature and Origin, till Mr. *Stahl* explained it, in his *Metalurgia*. It is extracted from the *Lapis Calaminaris*, and from the Lead Ore of the Mines of *Gosselar*, which Ore is very hard to melt, though it appears rich and shining. Three Substances are separated from it, *Lead*, *Zinck*, and a kind of *Cadmia Fornacca*, which, melted with Copper, makes a Bath Metal, or Prince's Metal, so called from Prince *Rupert*, who is said to have invented it. But the finest Metal of this Kind is made of *Zinck* and Copper melted together. In the melting this *Gosselar* Ore, the Lead remains at the Bottom of the Furnace, and the *Zinck* and *Cadmia* stick to the Sides. The *Cadmia* is to be long exposed to the Air before it is fit for Use; and the *Zinck* is purified by careful Meltings, and cast into Moulds.]



BOOK III.

OF MINERALS.

P R E F A C E.

By Mineral, in its general Signification, is understood, whatsoever Substances have any Relation to Mines, or are increased in, or have passed through them. A Mineral is defined by some in a stricter Sense to be, a fixed and solid Body, produced by Exhalations and Vapours, inclosed in the Bowels of the Earth, as Meteors are formed in the Regions of the Air; and others will have it to be a tender Substance, produced in the Earth by Coagulation, and increased by the external Addition of sensible Particles, and which oftentimes is the Matter that in Process of Time commences Metal; I shall comprehend, under the Name of Mineral, every Thing that is of a metallick Nature, and which differs only from Metals, in not being malleable as Antimony, or capable of Fusion, as the Loadstone, &c. and shall begin with Antimony, which comes nearest the Nature of Metals, and differs from them only in not being ductile.

I. Of Antimony.

MR. Furetiere says, *Antimony* is a Mineral that comes very near the Nature of Metals; and some are of Opinion it contains all the Principles of them, as it is found near all Sorts of metallick Mines, more especially near those of Silver and Lead; that it contains a double Mineral Sulphur, the one Metallick, approaching the Purity and Colour of Gold, the other earthy and combustible, not unlike common Sulphur; a fuliginous, footy, ill-digested Mercury, partaking of the Nature of Lead; and somewhat of a terrene fixt Salt. The same Author observes also, that the Use of Antimony, unless in the Composition of Paints, was wholly unknown till about the twelfth Age; but then a certain Monk, *Basilus Valentine* by Name, published a Book, intitled, *Currus Antimonii Triumphalis*, wherein he undertakes to affirm, that it is a Remedy against all Sorts of Diseases. Three hundred Years after, *Paracelsus* brought it into Vogue; but then in the Year 1566 the Use of it was condemned by Act of Parliament; and one *Besnier*, a Physician, in 1609, transgressing it, was excluded the Faculty. In the Year 1637 *Antimony* was again received by publick Authority amongst the Number of purging Remedies; and in 1650 the Act made in 1566

was repealed. Anno 1637 the Faculty caused it to be inserted among the purging Medicines in their *Antidotarium*, printed that Year, herein following the Opinion of *Matthiolus*; and, in short, on the 29th of March, 1668, it had the Sanction of publick Authority, by which Graduates had a Liberty of making use of it, but with a Prohibition to all others, unless by their Advice. It acquired the Name of *Antimony*, according to the Opinion of some, from a German Monk, the aforesaid *Valentine*, who, in his Search after the Philosophers Stone, was wont to make much Use of it for the more ready fluxing his Metals; and throwing a Parcel of it to some Swine, he observed that they had eaten it, and were thereby purged very violently, but afterwards grew the fatter upon it; which made him harbour an Opinion, that the same sort of Cathartick, exhibited to those of his own Fraternity, might do them much Service; but his Experiment succeeded so ill, that every one who took it died. This therefore was the Reason of this Mineral being called *Antimony*, as being destructive of the Monks.

Of Natural or Mineral Antimony.

Antimony is taken from the Mine in Masses of different Bigness, resembling Lead Ore, but with this Difference, that is both lighter and harder.

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And by Reason of this Similitude, some call it Black Lead, or Marcasite of Lead; others, the Wolf or *Saturn* of the Philosophers, because it devours and consumes all Metals whatever, Gold only excepted. It is also called *Proteus*, from the Diversity of Colours it assumes by means of the Fire; but its more ordinary Appellation is *Mineral Antimony*, and it is called by the more understanding, *Crude Antimony*, as never having sustained the Fire.

Heretofore *Hungary* was the only Place for Mines of *Antimony*, but now we have none from thence since the Discovery of those in *France*. The best and finest *Antimony* is that of the Mines of *Poitou* and *Bretagne*.

Mineral *Antimony* is sometimes met with pure, and sometimes loaded with a Sort of Stone, which the Mineralists call *Spar*. There is some full of *Striæ*, like so many Needles; and some in a Cake of a greyish Black. This is of very little use in Medicine, unless it be purified by melting, as will be seen hereafter. The Chymists use it indeed for their particular Preparations.

The purest Mineral *Antimony* is to be chosen, such as is as free as possible from all Sorts of Stone or *Spar*. It matters not from whence it comes, provided it be good; though there are those that pretend the *Antimony* of *Auvergne* to abound most with Sulphur.

Some Gentlemen of the Retinue of the Ambassadors of *Siam* have brought home considerable Quantities of a Mineral *Antimony*, but no Experiments have yet been made of it. This *Antimony* is white, and full of small Needles; and as far as I can judge, altogether proper for the same Purposes as the Mineral *Antimony* of *France*. As for that of *Hungary*, I can say nothing of it, having never seen any of it.

Of cast or melted Antimony.

Melted *Antimony* is what we improperly call *Crude Antimony*, because it has undergone the Fire to reduce it into Cakes and Needles, after the Manner as we see: It is brought from the Places beforementioned. To melt Mineral *Antimony*, the Mineralists take two earthen Pots, one whereof they fill with the Mineral in Powder, the other they place empty in the Midst of a strong Fire, laying a Sort of an Iron Skimmer upon it, upon which they put the Pot of Powder turned upside down; then encompassing both the Pots with Fire, the *Antimony* will melt, and pass through the Hole of the Iron Plate, and fall into the empty Pot underneath, and form itself into a Cake, as it is sent to us.

The Iron Plate with Holes, put between the two Pots, serves to keep back the Stone or *Spar* that is found commonly with the Mineral *Antimony*. When the *Antimony* is melted, they take the Pot off the Fire, and when cold, break it, and take out the *Antimony*, which then may be conveniently sent whither they please.

Formerly there was to be met with in *France* the *Hungarian Antimony* in Cakes or Loaves of three or four Pounds Weight, interwoven with small Needles running a-cross each other, of a golden yellowish Colour, and at Bottom white, inclining towards that of Silver. This *Antimony* was found in the Mines of the Mountains belonging to *Presburg*, the Capital of the *Lower Hungary*, where it was melted, and made into the Figure we had it in: But this is now so scarce, that it is next to an Impossibility to find any of it. Those who have worked upon this Sort of *Antimony*, have assured me, that it was much fitter to yield whatever is to be obtained from *Antimony* than that of *France*; and withal, that from every Pound of it they could obtain two Ounces of Quicksilver, better than that of *Spain*.

In *France* we have several Sorts of *Antimony*, which differ only according as they are better or worse purified and melted. And the next best to that of *Hungary* is what we have brought from *Saumur* in *Anjou*, whither it is sent purified from *Poitou*.

The *Antimony* of *Poitou* ought to be in fine beautiful Needles, long, large, white, sparkling, light, and easily broken, and with as little half-melted *Antimony* as may be, which resembles the Drops of Iron, which is commonly found at the Top of the Cakes in *Scoria*, and is called the Top of *Antimony*. This Defect, however, is seldom found in the *Antimony* of *Poitou*, by Reason that the People there are well versed in refining or melting it: And this is the Sort of *Antimony* that should be used in all the following Operations, because it abounds less with Sulphur, and affords more of the *Regulus*. We have also had, for some Time past, an *Antimony* from *Bretagne*, in small Needles, very pure, and perfectly fit for the same Purposes as that of *Poitou*. A third Sort is that we have from *Auvergne*, which, in one word, is good for nothing, being very hard, full of Drops, and in small Needles, of a tawny Blue, which makes it evident that it is not half purified, nor divested of its fetid and malign Sulphur, which gives abundance of Trouble and Difficulty to those who work upon it.

Besides the great Number of chymical Medicines which are made of, or drawn from *Antimony*, abundance of Artificers use it to promote the melting of Metals, and to make the *Regulus*, especially

especially in *England*, whither we send a great deal to put in their Pewter, to make it the harder, whiter, and more sounding. But I observe, nevertheless, that of late Years the *English* do not make so much use of it, because instead of the *Regulus* of *Antimony*, they use *Bismuth* now. The Letter-Founders for Printing use *Antimony*, to render their Lead the more durable and hard. *Antimony*, powdered, and boiled in a Ptisan with *Sarsaparilla*, *Guaiacum*, &c. is a certain Cure for the secret Disease. And how much soever this Drug has been condemned and out of use in Times past, it is altogether as much in Vogue now. When you make use of it, break it in small Pieces, or reduce it into a gross Powder, and put it into a Linen Rag, to be boiled with other Things. Some give the Powder instead of the Liver of *Antimony* to their Horses, and say it has the same Effect.

I shall not lose Time here to enter into a Disquisition, whether there be Male and Female *Antimony*, as many Authors affirm, as also that the Male is the coarser, more sandy, scaely, and light, and consequently less efficacious than the Female, which is more ponderous, bright-coloured, and more brittle; for I have dealt a great deal in *Antimony*, and never knew any other Difference but what arose from its Purification. When it is good, it may serve alike to all Purposes; so that I do not see how there can be two Sorts of it.

Antimonium, five *Stibium*, or *Antimony*, is a Mineral approaching very near to a Metal. It is heavy, shining, and in Crystals, shooting like Needles, of a blackish Colour: It is found near the Mines of Metals in several Parts of *Europe*; as *Hungary*, *Transylvania*, *Britany*, *Poitou*, and *Auvergne*. They get it in Pieces bigger or less, full of little hard Stones or Pebbles, which the Workmen call *Gangue*. They take the clearest, or that which has the least of the *Gangue* in it when they make use of it; for several prefer the Mineral *Antimony* before that which is cast and purified.

To purify or refine *Antimony*, they melt it over the Fire in Pots or Crucibles, in order to separate the *Gangue* or Dross; which cooling, they cast it into Cakes, as it appears when brought to us: this we usually, though improperly, call *Crude Antimony*, notwithstanding it has past the Fire. *Hungarian Antimony* was formerly brought into *France* in little Cakes, full of small Shoots like Needles, sticking interchangeably one with the other, shining and inclinable to white, like Silver Ore. But since this Mineral has been discovered in *France*, we have none comes from *Hungary*, whence it is become very scarce. The *Antimony* we ordinarily use, is brought from *Poitou*, which you ought

to chuse neat, in fine, long, brilliant Shoots, easy to break. It is naturally composed of a great deal of Sulphur, like common Sulphur, and of a kind of a *Regulus* like a Metal.

Of the *Regulus* of *Antimony*.

The ordinary or common *Regulus* of *Antimony*, without Iron, is made of *Antimony*, Salt-petre, and Tartar, melted together, and cast into a small Mortar greased, and so by knocking the Sides of it with a Hammer, the *Regulus* is made to fall to the Bottom; which, if it be good, ought to be white, in beautiful Scales, and like *Bismuth*. If the *Regulus* should not prove good at the first Operation, it may be melted and purified again with a little Salt-petre. The oftener it is melted, the more will it decrease, but the better will it also be.

Of this *Regulus* are made the Cups and Pills, and other chymical Operations, as shall be seen hereafter. It is a strong Emetick and Cathartick, taken from four Grains to six.

Of *Regulus* of *Antimony* with *Mars* or Iron.

The *Regulus* of *Antimony* with *Mars*, is made of *Antimony*, Salt-petre, and Points of Horse-nails, or small Nails melted together; which by means of the Fire, and proceeding after the Manner as in the preceding Operation, is reduced into a *Regulus*.

This *Regulus*, if good, is much like the other, but withal ought to have a Sort of Star upon the Top. I shall not think it worth my while to recount the many fabulous Stories of the Antients concerning this Star, and the Cause of it, but shall only take Notice, that it appears finer or worse, according to the Degree of Fire the *Regulus* has undergone.

Of this *Regulus* are made the Cups, &c. which give a purging or emetick Quality to Wine that is let to stand in them some time; but you ought to be cautioned to throw away the three or four first Wines you make with the Cups, lest they should produce some ill Accident.

Whereas most People who have Occasion for the Goblets or Cups of the *Regulus*, find difficulty to come by them, let them apply to a Founder, and they may have what Sorts and Sizes they will, at a cheap Rate, without troubling themselves with Moulds, as several have done to their Labour and Cost, who have at last been obliged to give over the Attempt, not being able to make one Cup without a Hole, or some other Defect. You may

also get these same Founders to make you the perpetual Pills, or you may easily make them yourself with a Musket-ball Mould.

The Pills serve for those that have the Twisting of the Guts, or *Miserere mei*, so called. When they are returned from out of the Body, it is but washing and cleaning them again, and they will serve as oft as you please; which gives them the Name of Perpetual. They may also be infused, as well as the *Regulus*, in Wine, cold, for the Space of twelve Hours; which is afterwards a good Medicine for strong Constitutions.

Of Glafs of Antimony.

The Glafs of *Antimony*, is an *Antimony* separated from its Sulphurs, which are a deadly Poison; and for that Reason ought the Operation to be performed in a Chimney, to avoid the Exhalations: It is afterwards to be melted in a Crucible, and cast upon a hot Marble, to make in the Manner we see it, and as it comes to us from *Holland*.

It is an Operation I cannot advise any one to undertake, not only upon Account of the great Difficulty and Hazard attending it, but also because we cannot make it turn to that Advantage as the *Dutch* do.

Chuse the Glafs of *Antimony* flat, of a bright Red, and transparent, having as few small, thick, black, and grey Pieces in it as possible. I am told the *Hollanders* mix half broken Glafs in melting it, to discharge its black Colour the better, and to make it so fine coloured as we see it; but the Truth of the Fact I know not. Instead of throwing it upon Marble, one may put it in a Founder's Mould, and so make Goblets or Cups of it; but this is a Work only for the Curious, there being no Demand for them.

This Glafs of *Antimony* serves for a Vomit, taken from two to six Grains. Apothecaries make the emetick Wine with it.

Of the Liver of Antimony.

The *Liver* of *Antimony*, improperly called *Crocus Metallorum*, is made of *Antimony* and common Salt-petre, mixed and incorporated well together, and by means of lighted Charcoal reduced into a Stone, after the Manner as we have it.

This *Liver* of *Antimony* ought to be chosen in fine shining Pieces, smooth, brittle, and when bruised or pulverized, of a reddish Saffron Colour, which is the Reason of its being called the *Crocus* or Saffron of Metals; but in Pieces it ought to be Liver-coloured, from whence also comes the Name of *Hepar*, or *Liver* of *Antimony*.

This *Liver* is a Sort of *Catholicon* for Horses; more especially to purge and put them in Case, if taken from one Ounce to two in wet Bran, as Mr. *Soylesel* directs, in the Book called *The Compleat Farrier*: It is of some Use in Medicine, but so little, it is hardly worth speaking of; but on the contrary it is much used for Horses, as well under the Names above, as under that of the Imperial Powder.

This Operation, which seems the easiest in the World, is notwithstanding very difficult to be performed with Success, more especially if one has not good *Antimony* and good Salt-petre, or if it be filled with Salt, which but too frequently happens: Those that undertake this Operation, must dry the Salt-petre, and make choice of the *Antimony* of *Poitou*, not of that of *Auvergne*, as well because it is very full of Sulphur, as because it is not so well cleansed as the former; and after they been exposed some Time, mixed together, to the open Air, put a sufficient Quantity into a Mortar, or Iron Pot, placed in a Chimney; and upon Application of the Fire, a great Noise, which the Chymists call a *Detonation*, will happen; and when that is over, and the Vessel cold, the Matter must be separated from its Dross or Scum, which is white, and the Bottom will be a Stone, such as I have described. *Note*, You had not best make use of a Bell Metal Mortar, for fear of breaking, which sometimes happens; or be apprehensive of Fire. For, on the contrary, this Operation is the best Thing imaginable for sweeping a Chimney; but observe to put a Cloth before the Chimney, and to get far enough off for fear of the Vapours, and that you do not perform it in any publick Place. It is an Operation of a very capricious and uncertain Nature; for I have seen a great Quantity of Salt-petre and *Antimony* mixed and prepared together, that has made a very fine Composition: And again, when one has proceeded after the same Manner, in all Particulars, the Result has been less beautiful, and sometimes it has altogether miscarried. Those therefore that have Occasion for it in Powder, must take Care that it be of a fine Red, and not the Powder of such as sticks to the Tops or Sides of the Vessel, which is in small, thin, brown Scales; or such as has been spoilt, which is often powdered notwithstanding, and so sold, and this is the Reason some sell it so much cheaper than others.

I have observed, that the true Crude *Antimony*, or that immediately from the Mine, without having been melted, makes the *Crocus Metallorum* much better than the common Kind.

Those that would have *Crocus Metallorum*, fit to be taken inwardly, must make it with equal Parts

Parts of *Antimony*, and refined Salt-petre, and then reduce it to a subtil Powder, and wash it many Times in warm Water, as well to free it from any remaining Salt-petre, as to make it a little more emetick. The more emetick you would have it, the more Salt-petre must be used; but it considerably diminishes the Quantity, and makes it a great deal the dearer; though this ought to be no Consideration, since, in small Quantities as it is usually demanded, it is sold at such a Rate, that it amply rewards the Labour and Expence.

One may give what Colour one pleases to the Imperial Powder, or *Liver of Antimony*, according to the Preparation, or according to the Salt-petre that is made use of; which if it be of the ordinary Sort, will make it a little darker, or upon the *Liver Colour*, more than if it was of the best and finest Salt-petre; and if you add decrepitated Salt, that is, such as has been dried and half calcined, till it has done Crackling, it will be a fine Red, inclining to that of *Opal*, and therefore it has obtained the Name of *Magnesia Opalina*, or the Ruby of *Antimony*.

Some make use of the white Dross, as well alone, as to draw from it a Salt, or fixed Salt-petre with Water, which is a very good Medicine for Horfes; *Crocus Metallorum*, both washed and unwashed, is used in making the emetick Wine, which is done by putting the *Crocus*, or *Liver of Antimony*, in White Wine, and infusing of it for twenty four Hours.

Of Diaphoretick Antimony.

Antimony Diaphoretick, or the *Calx of Antimony*, is the *Antimony of Poielou*, and finest Salt-petre incorporated together, made into a Powder by the Means of Fire and warm Water; which, before it is quite dry, is formed into small Cakes, and so dried and kept for Use. This Medicine is sometimes used in malign Fevers, wherefore some prescribe it in the Plague, and other contagious Diseases, it being a Sudorifick, and an Expeller of the *Virus*; though there are others very dissident of its Qualities, supposing it to have no manner of Virtue, but to be only a Sort of Chalk; which I will not pretend to judge of, but leave it to the Physicians to do it. One must be careful that other Things are not substituted for it, as *Ceruse*, and the like, which ought to be avoided, and may make one careful to buy it only of faithful honest Men; for I know no certain Proof of it, unless it be that genuine *Diaphoretick Antimony* ought to be extremely white, soft, brittle, and wholly void of all Taste or Smell, being perfectly insipid. Some ingenious Men have assured me, that the Quality

of this Medicine is quite altered by keeping: For whereas, when newly made, it is Diaphoretick, it becomes Emetick when old; but this is what I have not experienced; but be it how it will, the new ought always to be preferred.

Two Sorts of Salt may be drawn from Lotions made of it; but considering the small Quantity that is to be obtained, I cannot advise any one to trouble himself about-it.

Of the Flowers of Antimony.

The *Flowers of Antimony* are made in Pots put upon one another, called *Aludels*, being a Vapour raised from *Antimony* by the Force of Fire, and found in the Pots in white Powder, which may be gathered with a Feather. Note, If you make use of an earthen Retort instead of *Aludels*, you will have the Flowers red.

The *Flowers of Antimony* are a powerful Vomit, good against the Epilepsy and intermitting Fevers, the Dose is from two to six Grains; and of the red, being more emetick, from two to four, taken with any Sort of Conserve, or in Broth. And I cannot but observe, by the bye, that a Man ought not to deal in chymical Medicines, without Advice of a faithful and experienced Physician; Empiricks killing with them more than the Sword. How effectual soever a chymical Preparation may be, aptly and duly taken, it may be altogether as pernicious unseasonably prescribed.

Of the Butter and Cinnabar of Antimony.

The *Butter and Cinnabar of Antimony* arise from the same Matter, the Degrees of Fire only making the Difference: The Matter is a Mixture of *Antimony* and corrosive Sublimate put into a Retort. That which comes over first is a transparent Oil, next an Oil as thick as Wax, which being well wrought, is like white Sugar-candy; and the third Matter produced by the Violence and Force of the Fire, is a reddish Substance in small Needles, pretty much resembling native *Cinnabar*, from whence it has its Name.

This *Butter of Antimony* is a strong Caustick, but its principal Use is to make the Angelick Powder, as will be seen hereafter; the *Cinnabar* is sudorifick, wherefore it is made use of sometimes in the Small Pox, from six to fifteen Grains.

The best *Butter of Antimony* is very white, and perfectly like to white Sugar-candy; it ought to be as dry as possible, and for that Reason should be kept in a Bottle well stopped.

The *Cinnabar* ought to be chosen in little Pieces, red, and as full as possible of those *Striae*,

or

or little Needles; that which is blackish is to be rejected.

not being at all fat. One may also draw another Liquor from Antimony, with Sugar-candy.

Of the Powder of Algarot, or Mercurius Vitæ.

The *Powder of Algarot*, or the *Emetick* or *Angelick Powder*, so called, is a white Powder made with Butter of Antimony dissolved and thrown into warm Water, and several Times washed, and then dried, and so kept in a Glass Vial for Use.

This Powder is a very strong Purge both upwards and downwards; the Dose from two to eight Grains, in Broth, or any other Liquor. This Powder ought to be very white, and made with the Icy Oil or Butter of Antimony; which is made of the *Regulus*, as we shall see hereafter; for when the *Emetick Powder* is made with the Butter which was made of *Crude Antimony*, it is by no means so white as when with that which was made of the *Regulus*.

Of Bezoar Mineral.

Bezoar Mineral is made of Butter of Antimony, prepared with Spirit of Nitre, and reduced into a white Powder, to which are attributed the same Virtues as to the Diaphoretick Antimony, and which therefore is by many used for it; but this we ought be aware of; its Dose is from six to twenty Grains.

Of the Icy Oil of Antimony.

The *Icy Oil of Antimony* is made of the *Regulus of Antimony*, and Sublimate corrosive; which, by means of the Fire, are reduced into an Oil, of the Consistence of that we spoke of before. When the Oil is come over, if you encrease the Fire, and take away the Recipient, and put another in its Place with cold Water in it, you will have a very good and beautiful running Mercury.

This Oil is very corrosive, and serves to consume fungous Flesh; it is of this Oil you ought to make the Powder of *Algarot* and *Bezoar Mineral*.

Of the Caustick Oil of Antimony.

The *Corrosive Oil of Antimony* is made with Powder of Antimony, Spirit of Salt, and Corrosive Oil of Vitriol; out of all which, by the means of Fire, is drawn a whitish Liquor, to be kept for Occasion; it is of use in carious Bones, being a strong Escharotick; also for Gangrenes, and to deterge old Ulcers.

This Liquor is not, properly speaking, an Oil,

Of the Tincture of Antimony.

The *Tincture of Antimony* is made of Salt of Tartar and Antimony, melted together; from which, with Spirit of Wine, is drawn a red *Tincture*, esteemed a very good Antiscorbutick; as also to be good against hysteric Vapours in Women, the scorbutick Itch, and many other Diseases; Dose from four to twenty Drops.

Of the Magistery and Precipitate of Antimony.

This *Precipitate* is made of a very fine Powder of *Antimony* and *Aqua regia* mixed together, and afterwards thrown into an earthen Pan of Water; the Powder found at the Bottom is to be dulcified by washing, and is properly the Sulphur of *Antimony*, being inflammable, like common Sulphur: Its Use is in Apoplectick and Paralytick Cases; Dose from two to twelve Grains in some convenient Vehicle. Besides this Sulphur of Antimony, there is moreover another called the *Golden Sulphur of Antimony*, which is made of the *Scoria*, or Dross of the common *Regulus of Antimony*, without *Mars*; from which, being boiled in Water, filtrated and precipitated with Vinegar, you will have a red Powder, which, when dried, serves to provoke to vomiting; the Dose whereof is from four to six Grains in Broth or Pills. Let it not seem strange that I enlarge not more upon the Chymical Processes, since they are not the Druggist's Business; and Messieurs Charas, Glacer, and Limery, have so amply treated of them already.

[*Antimony* is the *σπις* of *Dioscorides*; the *τετρασπεν* of *Hippocrates*; the *Lapis Spumæ candidæ nitentisque non tamen translucens* of *Pliny*; and the *Ailmad* or *Alamad* of the *Arabians*. *Antimonium*, *Charlt. Foss. 49. Worm. 125. Stibium, Fabr. 27*. It is of different Kinds; some is dug up with the Appearance of polished Iron or Lead, but brittle and mixed with white crystalline Stones; some is composed of fine shining Lines like Needles, sometimes placed in regular Ranks, sometimes without any Order, and this is what is called *Male Antimony*; some is disposed in thin broad Plates, or *Laminae*, called *Female Antimony*; some is a Congeries of small Lead-coloured Rods; this is got from a tender white Stone, and easily melting in the Fire like Sulphur, which enters its Composition in great Quantities. *Antimony*, of this Kind, is found in several Parts of *Italy*; some is marked with Saffron-coloured, or reddish Spots, as the *Hungarian*

garian Antimony, which is mightily esteemed by the Chymists. *Antimony* is thus frequently found in a particular Ore, but often also it is mixed with other Metals, and hence it has its Name from *ἀντί μόνον*, an Enemy to being alone. Ores of *Antimony* are found in many Countries; the Glebes are dug out of the Earth, mixed with a stony Matter.

Antimony, when made into a *Regulus*, and calcined in the Sun, may be separated from almost all its Sulphur, and turn to an Ash-coloured true vitrifiable Calx, which melted by a strong Fire, becomes a Hyacinth-coloured Glass; and if any sulphureous Substance be added to this Glass while in Infusion, it presently recovers its *Reguline* Form and Splendor. *Antimony* contains so much Sulphur, that an acid Liquor may be extracted from it nothing different from Spirit of Sulphur. From these, and many other Observations, it is evident, that *Antimony* consists of a sulphureous Acid, of a bituminous, inflammable Part, and of a vitrifiable, metallick Earth. The *Regulus* is dissolved by *Aqua regia*, but is only calcined by the other Dissolvents of Metals. *Antimony* dissolves and destroys all other Metals, except Gold, when melted with them, but melted with that, it consumes all the other Metals which were mixed with it, and the Gold comes out brighter and finer than before.

What our Author means by its being used as a Fucus or Cosmetick, is, that among the Antients it was used to dye the Eyebrows and Eyelashes black, as by Queen *Jezabel* in the Scriptures, and the Hebrew Women in general, who were reproved for it by the Prophets.

Crude Antimony may be safely taken inwardly in large Doses; but its Preparations, by means of Chymistry, are almost all of them rough, and very violent. They have been much in Esteem, but at present the *Cinnabar* is almost the only one in Use, except for Horses.

If any one is in Danger from an over Dose of any of the other Preparations, Spirit of Vitriol, or *Oleum Sulphuris per Campanam*, is a much safer and more expeditious Thing to check the Vomiting, &c. than *Opium*.]

2. Of the Load-Stone.

Pomet. **T**HE Load-Stone, according to Authors, is a black Mineral Stone, and is endued with surprising Qualities; such as directing its Poles towards the North and South, attracting Iron or Steel, and communicating its Virtue to them by the Touch. It is found in almost all Sorts of Mines, more especially in those of Copper and Iron, of whose Nature it participates.

Good *Lead-Stone* is very solid, not porous nor very heavy, and of an homogeneous Substance; of the Colour of Iron, or a shining Black, and sometimes of a grey or obscure Blue, inclining to Red. The Virtue which the Load-Stone communicates to Steel, is lost when the Figure of it is altered, whether it be with a Hammer or one's Fingers, as may be seen with a straight Needle if bent, or a crooked one if straightened, after it has been touched, as Father *Grimaldi* affirms in his *Physicks*. The *Lead-Stone* that attracts Iron very forcibly, is called a generous or noble Stone. The Way of keeping it is in a dry Place, wrapped in Scarlet Cloth, or rather to preserve its Virtue, to arm it, and hang it up by its *Equator*, with a Cat-gut, that it may have its free Tendency. If it chance to fall, it loses its Strength for awhile: Its Poles are found by applying to it Pieces of a common Needle; for the two Places where the Needles remain strait, are the two Poles. It is said this Stone, taken inwardly, intoxicates and renders stupid; and that its Antidote, or Counter-Poison, is Gold or Emerald Stone. *Matthiolus* tells us, that red Bronze Metal, melted with some of this Stone, becomes as white as Silver, after the same Manner as Copper does of a golden Colour, with *Lapis Calaminaris*. *Pliny* says, *Dinocrates* the *Alexandrian* had begun to vault the Temple of *Alfnoe* with Load-Stone, in order to have his own Statue, which was made all of Iron, suspended in the Air. The same Thing has been affirmed of *Mahomet's* Temple, but these Accounts are altogether fabulous. It is called in *Latin*, *Magnes*, from a Shepherd named *Magnes*, that happened to discover it upon Mount *Ida*, by hitting upon it with the Iron of his Sheep-crook, according to *Nicander*. It is also called, *Lapis Lydius*, or *Heraclius*, because found in *Heraclaea*, a City of *Magnesia*, which belongs to *Lydia*: In *French* it has the Name of *L'Aimant*, from its Love or Attraction of Iron. It is besides called *Lapis Herculis*, because it directs to find out the Ways, over which *Hercules*, by Antiquity was said to be the presiding Divinity: And lastly, *Sideriis*, from its Adhesion to Iron, which the *Greeks* call *Sideros*.

Beside, the forementioned Load-Stone, the Abbot *de Vallemont*, in his Treatise, tells us of another Kind, which was found upon the Top of *Chartres* Steeple, in the Year 1691, and which he had experienced to attract Iron, and to direct its Poles North and South, and to have the same Declination as the ordinary Load-Stone. It were to be wished therefore, that this Kind could be oftener met with, and it ought to be sought after amongst the Ruins of old Buildings, it certainly having very extraordinary Effects. *Mr. de Vallemont* has shewn
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me one of them of a surprizing Excellency and force, in attracting Iron of a great Weight. I would willingly enlarge upon this Sort of Load-Stone, were it more common, but it is very scarce; and since the King has had one presented to him, it is sought after with great Diligence, to adorn the Cabinets of the *Virtuosi*: However, I refer the Curious to Mr. *Vallenmont's* aforesaid *Treatise*, who has obliged the Publick with the Description of this Load-Stone, and explained how it was formed by Nature in the aforesaid Place. There is a third Sort, but very rare also, which is what we call *White Calamite*, or the *White Load-Stone*. There is moreover, a fourth Sort, very frequent and common amongst us, being no better than a sort of Dross of Iron, but this is what is commonly sold, because the true black *Æthiopick* one, by Reason of its great Excellency, is scarce, and we cannot shift without it, especially those that go to Sea, because it always tends towards the North, and shews the Pilots where they are. The *White Magnet* also, being of great Virtue, is much sought after, but seldom met with; and in its Place there is commonly sold a worthless Sort of Marble, or white Earth, which is found sticking to the common Load-Stone; but this is easily distinguished from the true White Load-Stone, which is of a sort of greyish White, ponderous, and attracts Iron as forcibly as the black one of *Æthiopia*, which that which is sold for it will not do; besides this, its Cheapness sufficiently argues its being spurious. We therefore are obliged to content ourselves with such as are brought from divers Places, particular from *Auvergne*, which we can hardly get ten Groats a Pound for; much less could we be able to sell them at the Price of genuine Stones, which some have been glad to purchase for their Weight in Gold; but though we find much Fault with what we sell, it does not follow but there are some good, though in Truth you will scarcely meet with above ten amongst a Thousand. However, those among ours that can raise small Needles, or make the Filing of Iron move upon a Plate, by only passing the Stone along underneath, without touching it, or have Force enough to make Steel-Dust stick to them, when thrown upon them, may serve for any medicinal Use, and for the *Emplastrum Divinum*, which is their chief Use therein.

Magnes, Lapis Heraclius, Lapis Sillemery, deritis, Lapis Nauticus, or the Load-Stone, is a compact, hard, Mineral Stone, pretty heavy, and of a black or brown Colour, or obscure blue, which is found in Iron or Copper Mines. The best is found in *India* and *Æthiopia*; but it is likewise brought from *Italy*, *Sweden*, and *Germany*: It has a great many excel-

lent Properties, both for Travellers and Artists, which are too tedious to relate. The most valuable *Magnet* is that which attracts the greatest Weight of Iron. I have seen a Load-Stone no bigger then a common Apple that would attract and suspend a Bar of Iron that weighed twenty-two Pounds. This Stone was sold for an hundred Pistoles.

They make the Load-Stone one of the Ingredients in the Composition of Plaisters appropriated to Wounds that are made with a Sword, where they think some Pieces may be left behind; for they believe that the Load-Stone which is in the Plaister, attracts and draws the Iron out of the Wound, though the Virtue in the Load-Stone there can never produce this Effect: For first of all, being powdered finely, as it ought to be, it loses all its Force of Attraction: And, secondly, being mixed in the Plaister, though its Virtue should remain, it would not have Power to act, being confined by the Viscidity of the Gums and Resins. There is a white Load-Stone, but it is very scarce; it ought to be of a greyish White, heavy, and attractive. All these Stones are astringent, and stop Blood, outwardly applied.

[The Load-Stone is the *Magnes, Aldr. Mus. Met. 553. Worm. 62. Charlt. Foss. 62. Lapis Magnes, Matth. 1384.* the *Ἡράκλειος λίθος* and *Ἡρακλειωτὶς* of the Greeks; the *Magnetis* of *Avicenna*; and the *Calamita* of *Rhazes*. It is also called *Lapis Lydius*, but this Name ought to be avoided, because it is common to the Load-Stone, and to what we call the Touch-Stone, by which the Truth of Gold and Silver are tried: They both received this Name from their common Country; but these two Significations of the *Lapis Lydius* are to be carefully distinguished, the two Stones being very different from each other.

The Load-Stone is found in many Countries of Europe, particularly in Iron Mines; but the best are brought from *Æthiopia* and the *East-Indies*. It is undoubtedly a kind of Iron Ore; for in some Places of *Germany* they actually extract Iron from it; and when exposed to the Focus of a great Burning-glass, it manifestly discovers Iron.

It is not used inwardly in Physick; though *Galen* says it has the same Virtues as the Blood-Stone, and also some purgative Quality, for which he recommends it in Dropsies; and *Dioscorides* prescribes it to evacuate gross melancholick Humours. Externally it is drying, astringent, and consolidating, and is an Ingredient in some Plaisters.

The White Load-Stone is the *Magnes Albus, Mont. Ex. 13. Magnes Candidus, Kentm. 14. Aldr. Met. 560* From both these we ought to distinguish the

the *Magnes* of *Theophrastus*, which was, as he says, white, and shining like Silver, not hard, but easily turned into Vessels, neither did it attract Iron. It had its Name, as the *Load-Stone*, from *Magnesia*, a Town in *Lydia*. This was, in all Probability, a kind of native Litharge, and was that kind of *Magnes* said to be poisonous; whence from confounding this with the true *Load-Stone*, that was also, in after Times, accounted a Poison.]

3. Of Natural Cadmia, or Calamine-Stone.

Pomet. **C**ADMIA, Calamine-Stone, or *Lapis Calaminaris*, is a Mineral, whereof there are two Sorts, the Grey and the Red.

The first is not unlike grey Bole, only it is harder; it is found in *Germany* and *England*, near the Lead Mines, and also near *Liege*.

The second Sort is a Stone of a reddish Colour, interlaced with white, hard, heavy Veins, full of round hard Grains, of the Bigness of Pepper. These Stones are found in great Plenty in *Berry*, near *Bourge* and *Saumur*, where there are whole Quarries of them, and one may have what Quantity one will for the Digging. They may be had also in many other Places; but since those of *Berry* are as good as any, it is not worth our while to have them brought from more distant Places.

This Stone is of some Use in Medicine, as it is astringent and desiccative; it is also an Ingredient in some Galenical Compositions, for all which Uses, it ought to be prepared upon a Porphyry, and made into Cakes, with Rose-water, and is, prepared, what the Apothecaries called *Lapis Calaminaris*.

As for the first Sort, how genuine soever, it is of very small Use in Physick; its chiefest being to turn red Copper into yellow, which is called *Leton*, or *Brass*.

Cadmia, in *Arabick* *Clinia*, vel *Chili-Lemery*. *mia*, in *English* *Cady*, is a Mineral Substance, whereof there are two general Kinds, one natural, and the other artificial; the natural is metallick as *Cobalt*, or not metallick as *Lapis Calaminaris*: The artificial is a kind of *Scoria*, which is separated from the Metals in the Founders Works, as are the *Pompholyx*, *Tutty*, &c.

[*Calaminaris-Stone* is the *Cadmia Fossilis*, alias *Lapis Calaminaris*, *Worm*. 128. *Charlt. Foss.* 51. *Cadmia Fossilis*, *Aldr. Mus. Met.* 256. *Cadmia Lapis Calc. Mus.* 460. The Name *Cadmia* has been applied to several Things; *Dioscorides* understood by it, the Recrements of Brasses in the Furnace; *Galen* applied it to these, and also to another native Substance found in the Island of *Cyprus*, which he calls *λίθοδης*, or stony; and *Pliny*,

besides the factitious *Cadmia* of these Authors, mentions another by the Name of *Lapis Aërosus*, which he says was an Ore out of which Copper was made; which was, perhaps, the same with the *Cadmia Lapidosa* of *Galen*. The Dealers in Metals, and from them others, have also called by the Name of *Cadmia*, the Stone, which is the Subject of this Chapter, the *Lapis Calaminaris* used in making Copper into Brass; and the *Germans* have given the same Name to *Cobalt*: Therefore *Agricola* and the other more modern Writers distinguish three Kinds of *Cadmia*; the Metallick, the Fossil, and that of the Furnaces.

The metallick *Cadmia* is a fossil Substance, containing some Portion of Copper or Silver, or both, and is of two Kinds; the *Cyprian*, which is also found in *Asia* and *Italy*, and is a Copper Ore; and probably is what *Galen* means, though he does not mention that Copper was obtained from it; and the *German*, or *Cobalt*, a metallick Substance, from which are prepared *Arsenick*, *Zaffera*, and the *Encaustum Cæruleum*.

The fossil *Cadmia* is the *Lapis Calaminaris*, the Subject of this Chapter. It is a fossil Substance of a middle Consistence between Stone and Earth, and of different Colours, as whitish, yellowish, or reddish. These are all found in many Parts of *England*, and that of the last Colour is usually full of small ferrugineous Globules, and is found in great Quantities in *France*; the others are dug in *Germany*, near *Aix la Chapelle*. They seem to partake of Iron Ore, as most of them are attracted by the *Load-Stone*, and are the proper Ores of *Zink*. This was probably unknown to the antient *Greeks*, or at least not used in Physick, since it is not mentioned either by *Dioscorides* or *Galen*. It is now much used in drying Ointments.

The *Cadmia* of the Furnaces is the *Tutty* described already in its Place.]

4. Of the Hæmatitis, or Blood-Stone.

THE *Lapis Hæmatitis*, or *Blood-Stone*, *Pomet.* is a Mineral of a reddish Colour, hard, ponderous, with long pointed Needles, very dangerous to such as are pricked by them.

This Stone is brought us from many Places, there not being any Iron Mines wherein it is not found.

Chuse those Stones that are of the highest Colour, with fine *Striæ*, or Needles, and as much like *Cinnabar* as may be.

This Mineral has some Use in Medicine; as it is astringent, desiccative, and good to stop Bleedings, used externally, or given inwardly in fine Powder; the Dose is from four Grains to a Drachm.

Drachm. Mr. *Charas* observes, in his *Pharmacopœia Chymia*, Page 823, that if you drive it over the *Helm*, in a Retort, with *Sal Armoniack*, you may draw Flowers of the Colour and Smell of Saffron, which are what they call the *Flores Aromatici Philosophorum*: And moreover you may make with it a chalybeate acid Spirit; and with Spirit of Wine, a Tincture and Flowers; both which have great Virtues, according to the aforementioned Author, to whom I refer you.

It is said this *Stone* has a sovereign Virtue to stop Blood, from whence it derives its Name of *Lapis Hamatitis*, or the *Blood-Stone*.

This *Stone*, being powdered, as the *Lead-Stone*, enters the Composition of some Galenick Medicines: Also those that work in Metals, or in quest of the *Philosophers Stone*, make use of it.

Goldsmiths, and those that gild, use it too, to polish their Work, whether it be upon Silver, Copper, Iron, Wood, or whatever.

There is also another Sort of *Blood-Stone* called the *Red Crayon*, used by such as design and draw Sketches: it is like that of *Spain*, with this Difference, that it does not appear so sparkling with Needles, but dull and unpolished, like Earth.

This kind is brought us from *England*, and there are two different Sorts of it; the one good, which is pretty tender, soft, and easy to saw or cut into Crayons; but the other, not worth any Thing, hard and gravelly, and will not admit of cutting.

Hæmatitis, Lapis Sanguineus, or the *Emery*. *Blood-Stone*, is a hard, solid, heavy Stone, participating of Iron, disposed like Needles, of a reddish brown Colour, but becoming red as Blood, as it is reduced to Powder; they take it from the Iron Mines. The best and most esteemed is that of *Spain*, which is clear, heavy, hard, and solid, in fine Shoots, of a reddish brown Colour, with Streaks that are blackish without, and resembling Cinnabar within; it is very astringent and drying, stops Blood, and is given internally, as well as used externally, in fine Powder; the Dose from fifteen Grains to a Drachm. There is another Sort of *Blood-Stone* brought from *England*, called the *Bastard Hæmatitis*; it differs from the former in that it neither shoots into Needles, nor is so hard: Chuse such as is of a brownish red, weighty, solid, and smooth; it is astringent, and is called *Hæmatitis* from αἷμα, Blood, because being powdered, it is of the Colour of Blood, and stops Bleeding.

[*Blood-Stone* is the *Hæmatitis*, *Charlt. Foss.* 27. *Worm.* 64. *Lapis Hæmatitis*, *Math.* 1381. and variations of the *Greeks*; and the *Sedenigi*, or *Sadanegi* of the *Arabians*. It is an Iron Ore; and

in *Bohemia* they extract an excellent Iron from it: It is often found in Iron Mines in a distinct Ore, but there are always found near it, wherever it is, red Earth and red Stones; it is dug up in *Germany*, *Italy*, and *Spain*, but the last is the best. *Pliny* distinguishes five Kinds of it, according to the Countries it comes from, and its different Colour and Hardness; and others divide them from their outward Appearance; some are uneven and angular as those of *Spain*; some clustered on the Surface like Bunches of Grapes, and therefore called *Botryoides*, as those brought from the *Hartz Forest* in *Germany*; and others are formed in various Convolutions, like the Intestines, or the outer Surface of the Brain: these are beautifully delineated by *Aldrovandus* and *Imperati*.

The *Green Blood-Stone*, or *Heliotrope*, is the *Heliotropius*, *Worm.* 94. *Lapis Porraceus guttatum, punctulatum, vel fibratum sanguineus, Heliotropium dictus*, *Cup. Hat. Cath. Sup.* 50. It is a very beautiful green Stone, marked with red, and is said to possess the same Virtues with the other.

What our Author, and some others, mention as another kind of *Blood-Stone*, used for Crayons, is an Earth well known in *England*, under the Name of *Red Oaker*, *Ruddle*, or *Marking-Stone*. It is the *Rubrica Fabrilis*, *Calc. Mus.* 134. *Rubrica, Charlt. Foss.* 2. *Worm.* 4. *Rubrica Fabrilis mollis, Kentm.* 8. This is sometimes brought to a paler Colour with the Addition of Chalk, then worked up into Cakes, and sold under the Name of *Bole Armenick*; and in smaller round Pieces, marked with some Impression, under that of *Terra Sigillata Rubra*. There is also another harder Kind of this, the *Rubrica Fabrilis Dura* of *Kentman*; *Rubrica Laminata* of *Charlton* and *Wormius*, which is used by the *Turners*, and must be wetted before it will mark.]

5. Of Spanish Emery, and the other Emeries.

EMERY of *Spain* is a Marcasite, *Pomet.* or stony Mineral, with small Veins of Gold running through it, which is found in the Gold Mines of *Peru*, and elsewhere: It is of much Account amongst those that seek the *Philosophers Stone*, because of the golden Veins that adorn it; and it is at this Day so valuable and scarce, that those that have any of it may sell it for its Weight in Gold; the King of *Spain* has forbidden the Exportation of it out of his Kingdom, which is the Reason it is so very scarce to be found. This *Emery* is of little or no Use in Physick, though Mr. *Demeuve* says it is of a corrosive and caustick Quality.

There are, besides this, two other Sorts of *Emery*,

Emery, one whercof is reddish, and found in Copper Mines, as well in *Sweden* as other Places, and is what some sell for *Emery* of *Spain*, but it is easily distinguishable from it, being more rough, solid, and hard, of a fine red Colour, and not veined with Gold.

The third Sort is that which is commonly used by Armourers, Cutlers, and, in short, by all those that work upon Iron or Steel, there being nothing that polishes like pounded *Emery*. It is also used in polishing Steel, Looking-glasses, several sorts of Stones, and upon a great many other Occasions in the mechanick Way.

The common *Emery* is brought to us from several Countries where there are Iron Mines, and likewise from *England*; and there are none but the *English* that trouble themselves about the powdering or grinding it in Mills which serve only for this Purpose, or to grind Stones of a like Nature; for this ordinary or common *Emery* is so hard, that whoever would pretend to powder, or beat it in a Mortar, would be apt to make Holes in the Mortar: And as this Mineral is made much use of, especially in Powder, that ought to be chosen which is in fine Powder, pure and clean; if in Stone, let it be as bright-coloured, and as free as you can from other Stones.

Emery cuts Glass as the Diamond does, but makes no Impressions upon Diamonds as it does upon other precious Stones. It is said, if melted with Lead and Iron, it encreases their Weight, and hardens and makes them become red; which I have not experimented. Some also mix *Emery* with the soft pale *Madagascar* Gold, but it must be that of the second Sort, which comes from the Copper Mines.

It is made use of also to cut and divide Marble. They affirm likewise that it becomes an impalpable Powder, if put into Brandy or Spirit of Wine, which I cannot vouch for, having never tried it; that which falls from the Lapidaries Mills, and looks no better than Mud, is by some made up into Balls, and sold to several People under the Appellation of the *Putty* of *Emery*.

Smyris Lapis, or *Emery*, is a kind of *Lemery*. Marcasite, or very hard Stone, whereof there are three Sorts; the first and most esteemed is called *Spanish Emery*, because it is found in the Gold and Silver Mines of *Peru*, and several other Parts of *New Spain*; it is reddish, mixed with Streaks of Gold and Silver. This Kind of *Emery* is very scarce, for because of the Gold contained in it, the King of *Spain* has forbid the Transportation of it. The Second is smooth, and red, but has nothing of Gold or Silver

in it; it is found in the Copper Mines. The Third is common *Emery*, whose Colour is blackish; it is got in the Iron Mines; they powder or grind it in *England*, by certain Mills made for that Purpose, which they could not do in Mortars, because of the great Hardness of this Stone. This powdered *Emery* is used to polish or clean Arms, Knives, Looking-glasses, &c. You must chuse that which is in the finest Powder, pure and clean. All these Stones are made use of to cut and polish precious Stones, Glass, and Marble, and are of no Importance in Physick, except only that they may serve to clean the Teeth. What falls from the Lapidaries, in working with this, they dry and call *Putty* of *Emery*.

[*Emery* is the *Smyris* and *Smerillus* of the Shops, *Smiris*, *Worm*. 65. *Ald Mus. Met.* 653. *Charlt. Foss.* 27. The *σμερίς* of the Greeks; the *Smergium* of *Serapion*; and the *Sumbagedi* of the Arabians. It is a ferrugineous, heavy, metallick Substance, of the Iron Ore kind. The common *Emery* is blackish, and found in many Parts of *Europe*; especially in an Island on the Coast of *Tuscany*, and in *Guernsey*, in the *British* Channel. It is recommended by *Dioscorides* and *Galen* as a *Dentifrice*; but it corrodes the Teeth too much, and insensibly wears them away.

The *Spanish Emery* is greatly in Esteem with the Searchers for the Philosophers Stone: they extract a Tincture from it with Spirit of Sea Salt, with which they say they can fix Mercury in an Instant, and call this Substance Miraculous Precipitate, fancying they shall, by means of it, at length attain to the true Art of making Gold.]

5. Of the Magnesia.

MAGNALES, *Magnesia*, *Magne*, or *Pomct. Manganes*, is a Mineral pretty near approaching to Antimony, only it is softer, and brittle, like Free-Stone, and made up of shining Sparkles instead of *Striæ*.

There are two Sorts of *Magnesia*, the Grey and the Black; the former is very scarce, and so not much in use, but the black is very much used, as well by Enamellers, as Potters and Glass-makers, who purify and whiten their Glass, by putting in a small Quantity of it; whereas, should they add too much, it would be of a blue or purple Colour.

We have it from many Places in *Piedmont*, where it is found in the Mines in Pieces of different Figure and Bigness; as to the Choice of it, let it be as brittle, as sparkling, but as little loaded, or other extraneous Bodies as may be.

Monfieur *Furetiere* is very much mistaken in affirming

affirming *Magnesia* to be the same Thing as *Safre* and *Perigueur*, both which I am going to treat of, and first of *Perigueur*.

[*Magnesia* is the *Sapo Vitri Merr. Pin.* 214. *Manganeſe, Schwenk. Not. in Boer. Chym.* 140. It is a foſſil, metallick Subſtance, found in *Germany, Italy, Piedmont*, and near *Mendip Hills* in *England*; and wherever the Miners find it, they conclude there is Iron Ore near; it is uſed in Glaſs-making, and to colour earthen Veſſels of a purpliſh Black, but is of no uſe in Medicine.]

7. Of *Perigueur*, or *Perigord-Stone*.

Pomet. **P***ERIGUEUR*, or *Perigueux*, is a Mineral, or black Stone, like black Coal, heavy, hard, and difficult to be reduced into Powder.

Enamellers and Potters make uſe of it. There needs no other Choice about it than to ſee that it be pure, and clean from Impurities; for if there be any other Mineral mixed among it, it would ſpoil all the Works it is employed in; therefore they that ſell it to the Workmen, muſt take the ſame Care as they do in Lead Ore.

The *Perigueur* which we ſell at *Paris* is brought us from *Dauphiny* and *England*.

Lapis Petracorius, Perigord, or Perigucux, is a kind of Marcaſite or hard Stone, that is heavy and ſolid, black as Coal, difficult to reduce to Powder. It is met with in ſeveral Mines of *Dauphiny*, and in *England*, from whence it is brought us in Pieces of different Sizes; the Enamellers and Potters uſe it: You ought to chuſe it pure and neat; it is deſervative and aſtringent.

[This is the *Lapis Petracorius, Dal.* 34. It is a foſſil Subſtance, ſeeming to contain ſome Particles of Iron, and uſed by the Earthen Ware-workers; but never heard of in Medicine.]

8. Of *Safre*, or *Zaffre*.

Pomet. **S***AFRE*, or *Zafre*, is a Mineral of a bluifh or Partidge-eye Colour, which the *Engliſh, Dutch, and Hamburgers*, bring us from the *East-Indies*, and eſpecially from *Surat*.

Moſt of the *Safre* we have is in a grey Powder, like Aſhes, from which it ſo little differs in Appearance, that we are forced to conſult the Workmen, who uſe it, to know, by Trials, whether it is what it ought to be.

There are, however, two Sorts of *Safre*, the fine and the common; the former is in a bluifh or cineritious Stone, the latter in Powder; and very often ſo bad, that it is hardly good for any thing, and being ſo very weighty muſt needs be mixed

with ſome ſtony Subſtance, the other being much lighter.

Safre is much uſed by *Delft Ware* and Glaſs-makers, to give a blue Colour to both Sorts of Ware: It is alſo with *Safre* that they colour calcined Pewter, in order to make the falſe Stone, which I have noted in the Chapter of *Enamels*: And laſtly, with *Safre* it is that the azure Colour of Glaſs is produced, as is before obſerved, and of which is made the counterfeit *Sapphire*.

Saphre, Safre, Zafre, or Sapphire, is a Mineral whereof there are two Kinds; *Lemery.* one called *Fine Sapphire*, and the other common: The fine Sapphire is a pretty ſoft Stone, of a bluifh Colour; the common Sapphire is a greyiſh heavy Powder; both ſorts come from *India*. The fine Sapphire is uſed to give a blue Colour to Enamel, to Earthen Ware, and Glaſs; they likewiſe colour counterfeit Sapphires with it, whence it takes its Name.

[*Zafer* is a Preparation of *Cobalt* (to be treated of hereafter) which is thoroughly calcined, then made into a fine Powder, and mixed with three Times its Quantity of powdered Flint-Stones; then put into large Tubs, and moiſtened with a little Water, where, in a ſhort Time, it becomes a ſolid firm Maſs, and is called *Zaffra*: It is uſed by the Potters, Glaſsmen, &c. but not in Medicine.]

9. Of *Rufma*.

RUSMA is a ſort of Mineral, in Colour and Figure reſembling the Droſs of Iron, found in great Plenty in *Galatia*. This Mineral is in ſuch Vogue amongſt the *Turks* to take off Hair, that the *Grand Signior* has an Income of 30,000 Ducats *per Annum* ariſing from it. This Depilatory is very little uſed in *France*, but I am ſure if it was better known, it would be preferred to Lime and Orpiment upon that Occaſion, it being ſtronger and more efficacious, and the Uſe of it attended with no ſort of Danger.

Rufma is a Mineral that is like the Droſs of Iron, both in Colour and Figure; there is abundance of it in *Galatia*: It is a Depilatory very much uſed by the *Turks*.

[The *Rufma*, or *Reufma* of the *Turks*, has been taken, by ſome Authors, to be *Orpiment*; but it is much more probably the *Sory*, as I have already obſerved at the End of the Chapter of *Chalcitis*.]

10. Of *Orpiment*.

O*RPINE*, or *Orpiment*, is a Mineral commonly found amongſt Copper Mines; compoſed of a great Quantity of Sulphur, and

and a corrosive Salt, in Stones of a different Bigness, Colour, and Figure; some being of a golden, other of a reddish, and some of a greenish Yellow, and some almost quite red; which proceeds from the different Degrees of Heat in the Bowels of the Earth where it is formed. The Mines of Copper in which this *Orpiment* is found are never without some little Gold; and for that Reason those that worked in them do not fail to make Separation of it after the ordinary Method.

The yellow *Orpine* is found of different Colours; wherefore it is that the *Dutch* and *English* send it to us in such variety of Forms and Figures; but the best and most valuable is in thick Pieces, and in handsome bright Scales, gilt as it were with Gold, and which easily exfoliate, that is to say, which without much ado are separated and divided into thin *Laminae*, or Scales, glistering like Gold.

A second kind of good yellow *Orpine*, is, that which is half yellow, half red; or else full of reddish Veins: That which is in small Stones, and of a greenish yellow, is utterly to be rejected, being nothing but mere Earth; as also that which is in Powder.

Orpiment is of some Use in Medicine, being an Ingredient in some Ointments and Plaisters. It is also made much use of by Persons of several Professions, especially at *Rouen*, to dye their Wood yellow, of which they make Combs, and sell them for Box. Farriers use it upon several Occasions; as also Painters, when it is ground. It is one of the greatest Poisons we have, therefore we ought to take care to whom we sell it.

It is the reddish natural *Orpiment*, which ought to be denominated the *Sandarach* of the *Greeks*, and not the following, as most Authors have written; for the red facitious *Orpine* is made of this, as I am going to make appear.

Of Red Orpine, or Ratfbane.

Red *Orpine*, which is ordinarily called red *Arsenick*, as Mr. *Morin*, a Physician of the Faculty of *Montpellier*, has assured me, is made of the yellow *Orpiment*, as it is drawn out of the Mines, by heating it in the Fire till it has acquired a red Colour; and afterwards putting it into a Crucible with Hemp-seed Oil, or Sallad Oil, or Nut Oil, evaporating the Oil; and then adding more, and proceeding after the same manner, till the *Orpiment* becomes vitrified, and fit to be cast into Moulds, and so made of the form of a Cake, and reduced to a Stone, as we see it. This Process seeming very feasible, I was willing to attempt it, but could not succeed in it; for the *Orpiment*, instead of red, became cal-

cined and white, altogether like Plaister: But though I could not do it, yet I will not say the Thing cannot be done; Mr. *Morin* being a Man of too much Honour to affirm a thing he did not certainly know to be true.

However this be, *Orpine*, or red *Arsenick*, ought to be chosen in thick heavy Pieces, and as high-coloured as possible.

Red *Orpine* is but little made use of, except when ground into a fillamot Colour by Painters.

[*Orpiment* is the *Auripigmentum luteum*, Aldr. Mus. Met. 333. *Arsenicum croceum*, *Auripigmentum*, Charlt. Foss. 49. It is the *Αρσενικόν* of *Galen*; *Αρσενικόν* of *Dioscorides*; the *Narueth* of *Serapion*; and the *Zarnich asfar* of the *Arabians*. It is an *Arsenical Juice*, or, as some affirm, a kind of Gold Ore. It lies in squamous foliaceous Glebes, like the *Lapis specularis*, and is of three Kinds, yellow, reddish, and greenish; these are all three found in the Veins of Gold, Silver, and Copper Mines. *Orpiment* is soluble in Oil, and inflammable, emitting a thin Flame with a great deal of Smoak, smelling of Sulphur and Garlick, which, if collected, forms yellowish Flowers like Sulphur, and a blood-coloured Mass remains behind, by some called red *Orpiment* or *Realgar*. If the *Orpiment* be kept a long time on the Fire, the whole Mass sublimes into a beautiful red Substance like a Ruby, leaving only a little Earth behind. The first Fumes which come from this will turn Copper white and brittle. *Orpiment*, therefore, consists of the same Parts as common Sulphur, with some mineral Particles mixed among them. The common *Orpiment*, reddened by Fire, as I have already observed, is by some called red *Orpiment*; but the genuine red *Orpiment* is the *Arsenicum rubrum Sandaracha vulgo dictum*, Charlt. Foss. 13. *Sandaracha nativa*, Kentm. 18. *Arsenicum rubrum*, Risigallum, *Sandaracha Græcorum*, Mont. Ex. 13. and the *Realgar*, *Lesegall*, and *Zarnich-Achmer* of the *Arabians*. It is a Fossil of the same Nature with *Orpiment*, and seemingly only different in Colour. It is brought from *China*, cast into Figures of Pagods: It is no less dangerous than *Orpiment*; and though both of them have been recommended by old Physicians, and are at present taken inwardly in the *East-Indies*, yet nobody ought to think of giving them here: For the Wine infused in Cups of *Realgar*, which is a common Medicine there, has been attended with very fatal Consequences here; so great is the Difference in the human Body in different Climates; even the external Use of it here is not absolutely safe, and, as Chymistry has furnished us with much better Catharticks, ought to be wholly laid aside.]

II. Of natural white Arsenick.

Pomet. WHITE natural *Arsenick* is a Mineral, pretty much resembling the common or factitious white *Arsenick*, only it is whiter and more resplendent, and not so scaly. This Mineral, or natural white *Arsenick*, is found in Copper Mines; and when Miners meet with it, it is a certain Indication to them that Copper is near. It is found generally in the *Interstitia* between the true Spar and Clay, and sometimes it is met with in separate Pieces amongst the dry Clay. This *Arsenick* is very little known, and little used.

Of the white factitious Arsenick.

Though I have taken some pains to discover what the white *Arsenick* that we sell is, yet it has not been in my Power to inform myself; so that I am forced to rest myself contented, and to say, with others, that it is a Composition of Orpiment and common Salt sublimed together; which does not stand to Reason, since, if it were so, I do not see how the *Dutch* could possibly sell it at the Price they do. But not knowing what to determine in this Matter, I will only remark, that it ought to be chosen in thick Pieces, white within and without. Most of what we have from *Holland* is white, and rough without, and if you break it, transparent like unto Glass within, which gave occasion to the Antients to call it Crystalline *Arsenick*, which is in mighty request at this Day with some, but by others undervalued and rejected, some valuing the rough, and others the crystalline.

Arsenick is of some small Use in Physick, to perform some Operations, as shall be seen hereafter; but chiefly made use of by Dyers, and in the Country to destroy the Rats and other Vermin.

Of the Regulus of Arsenick.

Regulus of *Arsenick* is made of *Arsenick*, Potashes, and Soap, put into a Crucible, and by the Flame of a Lamp melted and cast into a great Mortar: It is much milder than the *Arsenick* itself. If the Dross of this *Regulus* is boiled in Water, and the Liquor filtrated, by throwing Vinegar into it, a yellow Powder will be precipitated, which is called the Sulphur of *Arsenick*, and acts with more Violence than the very *Arsenick* itself.

Of caustick or corrosive Arsenick.

Corrosive *Arsenick* is made of *Arsenick*, Saltpetre, and Sulphur, put into a Mortar and set on

fire, as in preparing *Crocus metallorum*. When the Noise, or Detonation is over, and the Whole is sufficiently burnt and grown cold, the Mass is to be pulverised, and put a-new into a Crucible to be calcined. If you would have this caustick *Arsenick* in Liquor, it is but placing it in a Cellar for a few Days, and it becomes an Oil *per Deliquium*.

One may draw also a Butter or corrosive Oil of *Arsenick* with Sublimate. This Oil, or Butter of *Arsenick*, is a very strong Caustick, and therefore very proper for making an *Escar*. But as all Preparations of *Arsenick* have a pernicious Quality, they are to be used with great Caution, and not without the Advice of some skilful Person.

Calcined *Arsenick* may be sublimed with Sea Salt decrepitated; and with this, as some do affirm, they counterfeit the *Venetian* Sublimate, which is what we call *Smyrna* Sublimate; but not being certain of this, I cannot avouch it for Truth, as I before hinted, when treating of Sublimate Corrosive.

Of the Arsenical Load-Stone.

The *Arsenical Magnet* is made of *Poistou* Antimony, Sulphur, and crystalline *Arsenick*, powdered together, and put into a proper Vessel that will bear the Fire, and the Whole may become one transparent Mass, such as the arsenical Magnet ought to be.

It is said this Preparation is a gentle Caustick, and performs its Office with great Ease. It is an Ingredient in the magnetick Plaister of *Angelus de Sala*, described in Treatises of Pharmacy by many Authors, such as M. Charas, &c.

Arsenicum, sive *Arrenicum*, or *Arse-nick*, is a Mineral that is weighty, shining, brittle, sulphureous, and caustick, of which there are three Kinds; one yellow, one red, and one white; the first is called in *Latin*, *Auripigmentum*, or *Orpiment*; this is a yellow shining Stone, taken from the Copper Mines, in Pieces of different Shapes and Sizes. There are several Sorts, that are distinguished by their Colours; for one is of a resplendent gold Colour, the other of a paler yellow; the beatifullest and most valued is in large Pieces, of a golden shining yellow. They easily separate, by little thin Scales that glitter like Gold. The reddish yellow Orpiment receives its Colour from the subterranean Fires that calcine it: The *Orpin* and the *Realgal* both are used by the Painters, after being finely ground on a Porphry.

The second sort of *Arsenick* is called *Sandarach Gracorum*, *Realgal*, *Reisgar*, *Refigalum*, or
Red

Red Orpiment. Of this *Arsenick* there are two Kinds, the one natural, and the other artificial; the natural is that which is calcined in the Mine by the subterranean Fires; the artificial, which is more common, being calcined by the ordinary Fire. You ought to chuse the *Realgal* that is in largest, heaviest Pieces, shining, and of the highest Colour: It serves the Painters. This Name of *Sandaracha* is given to *red Orpine*, because of the Resemblance it has in Colour with *Minium* or *Read Lead*.

The third sort of *Arsenick* is called white *Arsenick*, or simple *Arsenick*, by way of Excellence, as being the strongest of all. This is a Mineral in large Pieces that are hard, heavy, brittle, very white, shining, or crystallized without and within. There is the natural and the artificial: The natural is found in Copper Mines, but is scarce; the artificial is made with equal Parts of *Orpiment*, and common Salt mixed and sublimed together. All the Kinds of *Arsenick* are corrosive Poisons; but the most active and dangerous is the white. It does not usually work violently till half an Hour after it is taken; because the Salts that make the Corrosion are locked up, and naturally fettered in the Sulphurs, which makes it some Time before they are at Liberty, when they produce great Pains, Inflammations in the Guts, violent Vomiting, Convulsions, Restlessness, a general Loss of Strength, and at last Death, if not prevented. The Remedies proper on this Occasion, are, melted Fat, Oil, Butter, &c. in order to sheath the Points of the caustick Salts; and to evacuate upward and downward; then Milk being taken in good Quantities, sweetens and corrects the Acrimony of the Poison.

[*Arsenick*, properly so called, is a Substance extracted from *Cobalt*, an Ore found in *Saxony* and *Bohemia*, and other Places; to be described hereafter. There are three Kinds of *Arsenick*; the white, the yellow, and the red: To make them, the *Cobalt* is put into a calcining, reverberating Furnace; when the Flame has set it on Fire, it emits a blue Flame, and a copious thick Smoak with it, which is received upon the Cieling of the Furnace; and thence conveyed into a large Funnel, made of Boards of a hundred Ells in length; some of it goes out at the End of this Funnel; but the greater Part sticks to the Inside of it, in the Form of a whitish Soot, which is taken out about once in six Months, and serves to make all the three Kinds of *Arsenick*. The white or crystalline *Arsenick* is made, by subliming this Soot in Iron Vessels, into an opaque Substance, sometimes shining within like the *Encainium Album*, and sometimes streaked with red or crystalline Veins.

The yellow *Arsenick* is made by subliming the same Soot with a tenth Part of common Sulphur; the sublimed Mass is yellow, like common Sulphur, solid, shining, not altogether opaque, easily broken, but not apt to crumble into Powder. It is distinguishable from *Orpiment*, by not taking Fire when thrown upon burning Coals, as *Orpiment* readily does.

And red *Arsenick* is made of the same Soot and Sulphur, mixed with a small Quantity of a metallick Substance, called the *Spuma* of Copper. The sublimed Mass is solid, opaque, and of a cinabarine Colour.

The first of these is the common Ratsbane, or white *Arsenick*; the *Arsenicum Album*, *Ind. Med.* 15. *Arsenicum factitium Album*, *Aldr. Mus. Met.* 354. *Arsenicum Album seu Crystallinum*, *Schrod.* 3. 498. The second, or yellow *Arsenick*, the *Arsenicum factitium flavum*, *Aldr. Mus. Met.* 358. *Arsenicum citrinum seu flavum*, *Schrod.* 3. 498. And the last, or red *Arsenick*; the *Arsenicum rubrum factitium Officinarum*, *Wood. Art.* 2. P. 1. p. 50.

All these kinds of *Arsenick* are very powerful Poisons, and ought never to be thought of as internal Medicines, though some have been so daring to prescribe them. They consist of an acrid Salt, and a kind of mercurial or metallick Substance, which discovers itself when they are distilled in a Retort with any fat Substance; for, with a strong Fire, the *Arsenick* will be raised into the Neck of the Vessel, in a metallick Form like *Antimony*.

The arsenical *Magnet* is the best Preparation of Ratsbane for external Use; it has that Name from its supposed Power of attracting poisonous or other morbid Matter, from the Centre of the Body to the Surface. It is a powerful Ripener, and has been sometimes used with Success in Venereal Buboës.]

12. Of Sal Gem.

Pomet. *SAL Gem* is a natural Salt, so called from its Clearness and Transparency, like unto a precious Stone, which the *Latins* call *Gemma*. This Salt is found naturally in the Bowels of the Earth, in several Parts of *Europe*, principally in *Poland* and *Catalonia*. And since I have not myself been upon the Spot where it is, to confirm the Truth of what I say, it may not be amiss to let you see what Dr. *Perou*, of the Faculty of *Montpellier*, has written to me upon the Occasion, who says, That he was in *Poland* in the Month of *March* 1674, with his Eminence Cardinal *Janson*, who having the Curiosity to take a View of the Salt-pits of *Willisca*, near *Cracow*, had

had a mind to go down into them, which he did on a kind of Litter made for that Purpose, attended by divers of his Servants, with Flambeaux in their Hands. Being come to the Bottom, which was very deep, he was received by the subterranean Inhabitants, who live there with their whole Families, but look extremely pale, and was presented by them with Beads and Crucifixes; which Dr. *Perou* afterwards examining by his Taste, found to be made of a Salt, and to have the same Taste as that which the Druggists call *Sal Gemme*. The Cardinal had further Curiosity, and was conducted to the Workmen, who with Chissels and Hammers get this same Salt out of the Rocks; as they do Stones out of a Quarry. There were two Sorts of Salt in these Mines, and in the same Veins; the one finer, being more pellucid and transparent, which these Beads, &c. were made of, and which they separate from the other; which the *Poles*, and other Northern People, use in their Kitchens, and for their Tables. On seeing this, Dr. *Perou* was able to determine concerning the Pieces of Workmanship that his Eminence had presented him, that they were made of the purest true *Sal Gem*, sold by the Druggists, used by the best Dyers. As to the Salt of *Catalonia*, hear what Mr. *Tournefort*, who has been upon the Spot, says also in a Letter to me. "There are four Sorts of Salt in the Mountains of *Cardona*, a pretty considerable City in *Catalonia*. The first, and most common, is a fossil Salt, white, and pretty much resembling Sea Salt, only not granulated, but cut out in large Pieces, as we do rough Stones in our Quarries. The second is a Salt of an Iron Grey, or Slate Colour, which differs only from the former, in that it has a little blackish Earth mixed with it. The third is a red Salt, nearly of the Colour of Conserve of Roses, and differs from the others, in having a Mixture of Bole, or a kind of Rust of Iron in it. The fourth is the purest of all, and indeed the true *Sal Gem*, as transparent and bright as Rock Crystal. These several Sorts of Salts lie in *Strata*, or Beds, in this Mountain, and are very proper for any Uses of Life, and enter or penetrate into Flesh, better than Sea Salt, being not so fixed, and approaching nearer the Nature of Salt-petre. *Sal Gem* is easily wrought into what Figures you please; and accordingly little Boxes, Beads, and Crosses, and other the like Things are made of it. But nothing comes up to the Beauty of a certain Cavern in this Mountain, which is adorned on all Sides with most admirable Congelations of this salt.

The People hereabouts affirm, that this Salt grows in its respective Abodes, and the Holes that

you empty fill again after some Time; but this wants Confirmation."

Of the several Sorts of *Sal Gem* which I have spoken of, we deal in none but the best, that is, in thick Pieces, is easily broken, clear, and transparent, and fit for the Dyers Use. It is very observable of this Salt, that it grows red-hot, like Iron, in the Fire, and crackles there but very little, though on the other Hand it easily dissolves, being exposed to the Air; yet it may be cleansed from Dirt, by washing and drying it again immediately, without Injury. It is brought us from many Places, but in greatest Quantities from *Poland*. Mr. *Furetiere* and other Authors say it comes from the *East-Indies*; and that there is a Kingdom called *Danzal*, which signifies with them a Country of Salt, which affords yearly a Loading for six hundred Camels, which in *Aethiopia* is as ready Money. I do not think it worth while to waste Time in controverting what *Pliny* and others have observed concerning this Salt, when they tell us, that in *Charros*, a Town of *Arabia*, Houses are built of it; and Water is used instead of Mortar to bind the Salt Stones; or that the Sea derives its Saltiness therefrom, &c. But I must not here forbear to relate, that there are such Vegetations of Salt produced in the Mine, that Mr. *Tournefort* has a Vegetation of fossil Salt as white as Sugar, almost two Feet high, like a Shrub, growing out of a Root; which, without all Doubt, is one of the greatest Curiosities in all *Europe*.

Sal Gemmeum, *Sal Fossile*, or *Sal Gem*, is a Mineral, white and crystalline Salt, *Lemery*, which grows in Form of Stone, or a Rock, in several Mountains in *Catalonia*, *Poland*, *Persia*, and the *Indies*. This Salt being broken, is shining and transparent as Crystal. They say that certain People of the *Indies*, which inhabit the Countries where it is met with, but rarely, build transparent Houses with *Sal Gem*, which they work like Stone. The Taste of *Sal Gem* is like that of Sea Salt, but a little more penetrating; they use it with their Meat. Out of the Salt Waters of their Springs and Pits, in the *Franche Comté* and *Lorraine*, they make a *Sal Gem*; they evaporate these Waters to make the Salt which they use in those Countries as we do Sea-salt. There is made by Distillation, of *Sal Gem* an acid Spirit, altogether like Spirit of common Salt. *Sal Gem* is incisive, attenuating, penetrating, resolving, aperitive, laxative, proper in the Cholick, and to open Obstructions: They substitute in Compositions *Sal Gem*, for *Indian Salt*, called *Sal Indum*, which some believe to be a kind of Mineral Salt, and others Sugar.

[*Sal*

[*Sal Gem* is the *Sal Gemmeus*, *Aldr. Mus. Met.* 301. *Sal Fossilis, qui et Sal Gemmæ in Officinis dicitur*, *Worm.* 20. *Sal Fossilis pellucidus panonicus, qui dicitur in Officinis Sal Gemmæ*, *Kentm.* 9. It is of several Colours, white, grey, yellowish, reddish, and pellucid like Crystal; which last is the most pure, and ought to be esteemed the true *Sal Gem*, and only used in Medicine. It resembles Crystal both in Colour and Brightness: There are huge Rocks of it in *Poland*, *Hungary*, *Lithuania*, and other Places; its Virtues are much the same with those of Sea Salt.]

13. Of Sea-salt.

Pomet. **S***AL Marine*, or *Sea-salt*, is a Crystallization made of Sea Water, performed by the Sun, and reduced into Grains of a Cubick Figure, as Monsieur *Des Cartes* has made appear. As to its Origin, some will have it to proceed from the abovementioned Fossil Salt, or *Sal Gemmæ*; but since I cannot decide this Affair, it may not be amiss to transcribe here what Monsieur *Lemery* has written concerning it, *p.* 345.

Sea-salt is made at *Rochelle* in the Salt Marshes, which ought to lie a little lower than the Sea, and to be of a Clay Mould to retain the Salt Water that is drawn off into them; so that all Places that are contiguous to the Sea, are not fit for the Purpose.

When the Season begins to be hot, which usually happens in the Month of *May*, the Water that has lain in the Marshes to preserve them in the Winter, must be drained off; then the Sluices or Cams are to be opened, to let in what Quantity of Salt Water you please, which must be contrived to pass through many different Channels, where it is purified and becomes hot; then it is conveyed into plain level Places, in order for the Salt to cream. This Salt does not shoot throughly, but during the excessive Heats, the Sun evaporating some Part of the Humidity, and the Breezes from the Sea, which happen after the Heats, by their Coolness condensing and crystallizing the Salt.

But if it should chance to rain during this Process, only two Hours, there would be no making Salt again in fifteen Days Time, because the Marsh must be made clean, and all the old Water taken out, and other let in, in its Place.

Besides the aforefaid *Sea-salt*, there is the White Salt of *Normandy*, which they make with Water out of a sort of Mud or Sand that the Sea throws up in the Summer, and upon which the Sun has shone some Time; and when the Water is sufficiently impregnated with the Salt, that it will dissolve no more, which is found by the Swimming of

an Egg in it (for every Body knows that Water can be charged but with a determinative Quantity of Salt or Sugar) then the Water is to be strained through Straw; and when it is very clear, to be put on the Fire, and boiled till it comes to a Skin, and afterwards put into Baskets to reduce it to what we see it. The more this Salt is wrought, the whiter, pleasanter, and better Quality it is of; its constant Softness is besides very peculiar to it, as well as its growing the more insipid the longer it is kept. There are still other sorts of Salt in *France*, as that of *Lorrain*, which is made with salt Water cast upon hot Plates of Iron; that of *Franche Compté*, and many more, which I forbear to speak of, not having any Commerce in them.

Of the Purification of Sea-salt.

To purify Salt, it must be dissolved in Water, and the Dissolution filtrated through Paper; then the Humidity is to be evaporated in an Earthen Pan, and so there will remain a very white Salt; but it will be purer and better, if instead of evaporating all the Humidity, Part is left, and it be set to crystallize in a cool Place; for then at the bottom of the Vessel will be found the finest Salt, which may be separated from its Moisture and dried; then ought Part of the salt Liquor to be evaporated again, and having put the Vessel into a Cellar, let it crystallize again; thus must you continue to evaporate and crystallize, till at last all the Humidity be evaporated, because it will not shoot into Crystals any more; the Salt that is behind being filled with an oleaginous or bituminous Matter that hinders Crystallization. If you would make the Salt up into Loaves, like to those of Sugar, it must be put into Moulds when it is a little more evaporated than to a Skin, and after it has lain a little to coagulate and stiffen, it must be put into a Stove to dry it perfectly. This Salt, well purified, differs not in Appearance from double refined Loaf-sugar.

Decrepitated Salt is a *Sea-salt* calcined by the Fire, which serves for many Purposes.

Of Spirit of Salt.

Spirit of Salt is an Amber-coloured Liquor drawn from dry *Sea-salt*, by the Assistance of dried Potters Earth, a Retort, and Fire. The best *Spirit of Salt* we have comes generally from *England*, and if it is good it must be void of Phlegm, and faithfully and carefully prepared, of a fine yellow Amber Colour, and of a very acid and pungent Taste. I shall not spend Time, at present, to run through all the Particularities and different sorts of

Spirit of Salt; Monsieur *Lemery* hath done it at large already: Only I must observe of *Spirit of Salt*, that that which is right and good is much in use in many Cafes, as in Hernia's, Apoplexies, Scurvy of the Teeth, Gums, &c. The way of taking it, is by a few Drops in Water, or any other Vehicle, *ad gratum acorem*; for cleansing the Teeth, mix it with clarified Honey of Roses. Those that would have a dulcified Spirit of Salt, to be taken in a greater Quantity, may make it according to *Basil Valentine*, by mixing Spirit of Wine and Spirit of Salt, equal parts, and digesting them together in a Sand-heat for three Days.

Sal Marinum, Sal Commune, or Sea Lemery. Salt, is a Salt they make from the Sea

Water by Evaporation and CrySTALLIZATION. I believe that the Origin or Rise of that Salt comes from *Sal Gem*, and several Reasons confirm me in this Opinion. The first is, that Sea-salt is altogether like *Sal Gem*, or that Salt made from the Springs in the *Franche Compté*, the Pits of *Lorraine*, and several salt Lakes in *Italy* and *Germany* whence Salt comes, as all the World knows. The second is, that there is no Salt whereof there is such Plenty as of the *Sal Gem*: It fills not only in *Europe* abundance of Mountains of a great and vast extent, but it is found in almost all the Mines in *Ægypt* and the *Indies*; and there is no doubt but it is at the bottom of Sea, as well as the Earth we live upon, where we meet with Mountains, Rocks, and Mines, full of *Sal Gem*. The third is, that the Naturalists have at all Times observed, that the Waters which pass through the Mines of *Sal Gem*, and are loaded with the Salts, flow by an Infinity of Channels into the Sea. The fourth is, that the Sea-salt must necessarily be made in the Land; for if but a little versed in Chymistry, one may know that fixed Salt composed of an acid Earth, as the Sea-salt is, could never be perfected in the Sea Water; it wants the Earth to imbody the acid Liquor, otherwise it would always remain a fluid Salt, and never become solid. If we make a chymical *Analysis* of Sea-salt, one may draw from thence a great deal of acid Liquor, which being separated from the Earth, can never gain again its Consistence of Salt. This Argument being clear and demonstrative, it is likewise plain, that the Sea-salt must receive its Elaboration in the Earth before it is conveyed into the Sea: And as we see no Salt so plentiful in the Earth as *Sal Gem*, we may well believe it is that which gives a Saltiness to the Sea; besides, the Salt which we now take from the Sea is entirely like it in Taste, in Quality, and in Principles.

But I shall propose some Objections made against this: They say, that it is difficult to conceive that

the Sea, which is so large, and of so prodigious an Extent, should receive all its Saltiness from *Sal Gem*; for though there is great Quantities of this Salt in the bowels of the Earth, there does not appear enough to salt so much Water.

To answer this Objection, I say, that the Difficulty we apprehend of the *Sal Gem's* being sufficient to salt the Sea, proceeds from this, that we do not see the Quantity of Salt Mines, as we do the Extension of the Sea Water: But if we consider that the Earth is full of *Sal Gem*, or the like, in millions of Places, and that it discharges itself into the Sea perpetually; there is no doubt but we may have room to comprehend that the Earth, in all its Parts, contains Salt enough in it to make the Sea Salt.

Another Objection they bring is, that according to my Argument the Sea ought every Day to encrease in Saltiness, since it perpetually receives fresh Salt, which cannot be disposed of otherwise. I answer, that we cannot perceive any Augmentation of the Sea's Saltiness; for if there be a great deal of Salt that is brought into it, there is likewise a great Consumption by Evaporation and the Motion of the Waves, that are driven with such Rapidity and Violence, that they volatilize a great Share of Salt that is received in Vapour, as may be sensibly perceived by the salt Air we breathe in, when upon the Sea, and which contributes much, with the Agitation of the Ship, towards the Provocation to Vomiting. This Salt is driven by the Winds upon the Shore, where it is useful to make the Land fertile; and by a perpetual Circulation it is brought to the Sea again.

In *Normandy* they make Sea-salt by evaporating Sea Water over the Fire in great leaden Cauldrons to a Dryness; there remains a white Salt that is less piquant and less salt than that of *Rochelle*, because of the Evaporation, and perhaps occasioned from some Particles of Lead that are dissolved in it, which have blunted its Points. This kind of Salt loses its Strength as it encreases in Age.

There is a Salt prepared by CrySTALLIZATION at *Broüage* and *Rochelle*, besides several other Parts of the Country where there are Salt Lakes. The *Rochelle* Salt is grey, because of a little Earth that it carries along with it; it is nevertheless more penetrating, and saltier than the white *Normandy* Salt, which is made by Evaporation; but it is not so piquant as *Sal Gem*, because of the violent Motion of the Sea Waves, which blunts its finer Points. It may be rendered white as Sugar, by dissolving in Water, filtrating the Dissolution, and evaporating to a Dryness: But as in this Purification we separate it from a great deal of Earth, which made it weaker,

weaker, it does not by this Means encrease its Strength; but on the contrary it is less biting, because that the Fire has carried off, or blunted several of its more subtil Points. Sea-salt contains a great deal of Acid, a small Quantity of Sulphur and Earth. It is incisive, penetrating, desiccative, aperitive, resolute. It is used in Apoplexics and Convulsions; they mixed it in Baths and Suppositories, and being applied hot behind the Neck, it rarefies and dissipates Catarrhs.

[Alimentary Salt is made by the Evaporation of the Water of the Sea, or Salt Springs, Fountains, &c. and is of different Colours and Degrees of Purity, according to the different Methods used in making it. The acid Spirit drawn from it by a Retort, is, with proper Additions, the only dissolvent of Gold, and it also dissolves Tin, but will not touch Silver, or Lead. If this Spirit, when very pure, be saturated with Salt of Tartar, it concretes into a Substance resembling common Sea-salt in Taste, and in the cubical Figure of its Crystals; whence it appears that Sea-salt is an Acid perfectly saturated with an alkaline Salt. The Spirit is in great Esteem for promoting the Secretion of Urine, preventing the Stone, curing Dropsies, allaying Thirst in Fevers, and conquering the Malignity of the Juices in the Scurvy; its Dose is from three to fifteen Drops.]

14. Of Nitre, or Salt-petre.

Pomet. **SALT-PETRE**, which the Chymists call the *Dragon*, *Cerberus*, or the *Infernal Salt*, is an artificial or factitious Salt, drawn from several sorts of Materials, as from old Stones, whence it has its Name; from Earth, from Ashes, and also from Pigeons Dung. I shall not describe here the many different Ways of making Salt-petre, seeing they are largely described in the *Transactions* of the Royal Society at *London*; and also because it is easy to see it made in very many Places in *France*, and especially at the Royal Arsenal at *Paris*, where it is made in great Quantities, and where they divide it into half a Dozen Sorts, according as it is more or less purified; but the finest and best is what will hardly dissolve in Water, which they send in Casks to the Frontiers; and this Salt-petre may be kept almost in any Place without Loss or Decay, but is not exposed to Sale.

Besides the Salt-petre of several sorts made in *Europe*, we have it brought in large Quantities from the *East-Indies*, sometimes rough and unpolished, and at other Times as well purified and refined as any whatever. There are moreover other sorts of

natural Salt-petre, as that which is found sticking to Rocks and old Walls, in small white Crystals, and is what the Antients called *Aphronitrum*. Salt-petre is made also in *Ægypt*, with the *Nile* Water; after the same Manner as common Salt is made with us at *Brouage* or *Rochelle*; and this Salt-petre, made of the Water of the River *Nile*, is that which was so common in *France*, about sixty Years ago, and which used to be sold at a cheap Rate to the Whitesters, to blanch or whiten Linen, under the Name of *White Pot-Ashes*, *Alkali*, *Natrum*, or *Andrium*.

There is nothing that has more perplexed the Antients, as well as Moderns, than the *Natrum* of *Ægypt*, and that even whilst it was the commonest Thing in the World; for at *Paris* alone, there was consumed of it more than 2,000,000 Pounds yearly, without reckoning what the Tanners made use of to salt their Skins and Hides, which was the Reason it was prohibited afterwards; and since is become so scarce, that at present it is worth its Weight in Silver, and is prohibited to be sold by Merchants under large Penalties. Some will have this *Natrum* of *Ægypt* to have been a natural *Borax*, or a Salt drawn naturally out of the Earth in grey hard Pieces; some, that it was the volatile Salt and Froth of Glass-metal taken from the Pots and Furnaces of Glass Founders, and that it is either grey, white, brown, or bluish, altogether unfit for Vitrification, and fit for nothing but to throw to Sheep or Pigeons; but nothing can be more wide of Truth than this, since the true Salt of Glass is still so common among us, that it is sold not above a Groat, or five Pence a Pound, and never given to any sort of Cattle or Beasts; but used chiefly by Potters, and Dutch-Ware-makers, to prepare the Sand where-with they whiten and varnish their Works. And Light and Darknes are not more contrary than these two Things; for the Salt of Glass is in Cakes or Stones, extremely heavy like Marble; contracting no Moisture by the Air; whereas the *Ægyptian Natrum* is a white Salt in great crystal weighty Masses, salt and nauseous to the Taste; and besides, easily dissolving into Liquor, when exposed to the Air, and is of some Use too in Medicine, being an Ingredient of the *Lap. Crollii*. As for these last mentioned kinds of Salt-petre, we have but very little of them, and consequently make use of the artificial or factitious, which ought to be made choice of good and well-worked, according to what Degree or Quality it is of; but however, let it be always dry, and as void as possible of Salt. The common sort, when good, must be as white, dry, and free from Salt as may be; the refined also, the whiter, drier, and more beautiful,

beautiful, long, and large Crystals it is in, the better and more valuable it is.

The Use of Salt-petre is very considerable, as well upon account of the great Quantities employed in making Gun-powder, as that abundance of Artificers make use of it, and that divers chymical Preparations are made thereof. This great Consumption is the Reason why the Sale of it is forbidden in *France* to Grocers and others; and that those in and about *Paris* that use any of it, are forced (under pain of Confiscation and a Fine) to buy it at the *Arsenal*; and even then are not to use it to the Purposes of seasoning Meat, or the like, though it be proper enough for that End, as Mr. *Lemery* assures us.

Nitrum, Sal Nitrum, Sal Petreæ, Lemery. Salt-petre or Nitre, is a Mineral Salt, partly volatile, and partly fixed, which they make from Stones and Earth upon old Walls, Buildings, and the Urine of several Animals, which has lain a long time on Cellar Floors, or on the Stones; this Salt being formed by the Acid of the Air, which after it has penetrated and rarefied the Stones or Earth, is thus fixed and imbedded.

Salt-petre is separated by Dissolution, Filtration, and Coagulation; they powder grossly the Stones and Earth that have lain a long time in the Air, or which are taken from old Buildings; they steep this in a great deal of hot Water, in order to dissolve the Salt; they throw this Infusion upon Ashes to make a *Lixivium* or Lye; they pass and re-pass the same Liquor several times upon the Ashes; then being clear, they evaporate three or four Parts of the Humidity over a Fire; then they set the Liquor to cool and crystallize, taking the Crystals off to dry, and then evaporate almost all the Moisture away, and cool again as before. They then take off the Salt-petre that contains a great deal of lixivate Salt, and which is almost like Sea-salt, only that the lixivate Salt being Alkali, it changes its Nature, because the Pores are filled by the Acid of the Salt-petre. The Salt-petre made by this first Purification is called *Common Salt-petre*; the last sort of which ought not to be mixed with the first, because it is almost fixed, and consequently not so good.

They purify common Salt-petre by dissolving it in the Water, filtering the Dissolution, and evaporating Water over the Fire, till there appear a small Scum upon it; then leaving it to cool, without stirring, there will shoot fine, long, white, clear, transparent Crystals; pour off, by Inclination, the Water that swims upon it, and take out the Crystals to dry, evaporating again part of the remaining Water, and leave it to cool; new Cry-

stals will be formed, which dry as before; and, in short, evaporate the rest of the Liquor, till you find nothing at the Bottom but a little Salt, like Sea-salt. Repeat several times the Purification of your Salt-petre after the same Manner, and every time separate some of the fixed Salt. The more it is purified, the finer, larger, more shining, and transparent are the Crystals, freed from the fixed Salt, and difficult to melt. There is likewise a natural Salt-petre, sticking against Walls and Rocks in little Crystals, which is preferable to common Salt-petre, and which the Antients called *Aphro-Nitrum*.

The ordinary Salt-petre ought to be chosen well purified, in long Crystals, as hath been said, cooling upon the Tongue, and that casts out a great Flame, when thrown upon hot Coals. It is aperitive, resolutive, abates Thirst, provokes Urine, resists Putrefaction, allays the Heat of the Blood, drives forth the Stone from the Kidney or Bladder. The Dose is from half a Scruple to a Drachm.

Of melted Salt-petre, or Salt of Nitre.

What is called *Sal Nitri* is a purified *Pomel.* or refined *Salt-petre* melted by the Fire, and reduced into Cakes of three or four Fingers Thickness.

The *Salt of Nitre*, made after this manner, is very little in use, but instead of it, a Preparation called *Crystal Mineral*, which is made by casting a little of the Flowers of Brimstone upon some of the afore-mentioned melted *Salt-petre*, is very much in use.

Sal Nitri, or *Salt-petre*, is fixed with Charcoal, and said, when fixed, to have the same Properties as Salt of Tartar, and that a red Tincture of it may be drawn with Spirit of Wine, like that of *Sal Tartari*.

Of Spirit of Nitre.

From any of the sorts of Salt-petre, by means of dried Potters Clay, a Retort, and Fire, is drawn a Spirit extremely strong and violent.

Spirit of Nitre, when good, is as clear as Rock Water, and sends forth Fumes continually, if the Bottle is unstopt. Some rascally People sell *Aqua fortis* instead of it, therefore Care must be taken about it; but it is easily distinguished from *Spirit of Nitre* by what I have said, and by the low Price they sell it at; whereas true *Spirit of Nitre* cannot be afforded under eight Shillings the Pound, or upwards.

We have but little *Spirit of Nitre* now from *Holland*, either through the small Occasion we have

have of it, or rather through the Covetousness of Workmen, that will not afford it, but chuse to make use of *Aqua fortis* instead of it; whereby their Manufactures are neither so good nor so well wrought.

Spirit of Nitre, being a strong Corrosive, is very seldom used internally in its natural State, but is dulcified, or softened, by adding as much Spirit of Wine to it; and this is observable in this Mixture, that though it requires Heat, it wants no Fire to make it; for as soon as those two Spirits come together, there arises as great an Ebullition and Bubbling, as if they were upon a good Fire. In performing this Operation, Care must be taken to avoid the Fumes and Vapours, which are very hurtful and offensive. When this Mixture is become clear, it may be taken a few Drops of it in any proper Vehicle, and is said to be very good in flatulent and nephritick Cholicks. *Sal Armoniack* dissolved in this Spirit makes the *Aqua Regia*, or *Royal Water*, so called from its Capacity of dissolving Gold, the King of Metals.

Of Aqua fortis.

Aqua fortis is a Spirit drawn from Salt-petre, and German or English Vitriol calcined to Whiteness, by means of some dried Earth or Clay, a Retort, and Fire.

Aqua fortis, so called from its Strength, though it be not so violent as Spirit of Nitre, is very much in use with a great many sorts of Workmen, such as Coiners, Mint-men, Goldsmiths, Engravers, Cutlers, and abundance of others, as well as by those who dye in grain.

The best *Aqua fortis* we have comes from *Holland*; not but that it can be made as good in *France*; but that it may be sold a little the cheaper, it is not above half deflegmated with us, and consequently not above half so strong as it should be.

With *Aqua fortis* Water and Clippings or Filings of Copper, is made what they call the *Aqua secunda*: It is a Water, of a blue Colour, which Farriers make use of; they also use that which the Workers in Silver make; or, to have it a readier way, they buy Phlegm of Vitriol, or Spirit of Vitriol, that is made of *Aqua fortis*, and give them the Name of *Aqua secunda*.

There is no fear of counterfeiting *Aqua fortis*, or selling any other Spirit for it, there being none that can be afforded at a lower Price. So that when this Water has no Phlegm in it, to be sure it is good and genuine.

Of Crystal Mineral.

Crystal Mineral, which some call *Sal Anodynum*, or *Mineralis Lapis*, and commonly *Sal Prunellæ*, is

a refined Salt-petre melted in a clean Iron Pot, throwing a small matter of Flowers of Sulphur into it. When it is thus in Fusion, the Salt-petre being thoroughly melted, and the Sulphur consumed, let it stand a-while, and then take off the Scum with an Iron Spoon, and pour out the Salt-petre into an Iron Skillet or Porringer, to make it thin, after the Manner as we see it. We send to *Holland* for our best and whitest *Crystal Mineral*; but it being in little thick Cakes, we have but small Sale or Demand for it, since it is only fit to be sold by Weight, and to those that make use of it themselves.

Crystal Mineral ought to be chosen very white, new made, and thin; and when it is to be retailled, let it be as dry as you can. That which is made with purified Salt-petre, is to be preferred to that which is made with the common or ordinary Salt-petre; and this is easily known by its Whiteness, and its keeping well. It is a Mistake to believe, as an Author of late observes, that those who hawk *Crystal Mineral* about the Streets, make it up with Alum; for it is impossible to make Alum and Salt-petre unite, the Alum becoming immediately a Scum when it is thrown into the Salt-petre, as it does with Sugar, though it is pretended to be made use of to whiten that: So that those that make *Crystal Mineral* for Cheapness, only use the common Salt-petre; for it is but melting it twice, and it will be as white as the other, and the only Difference will be in keeping; but a short time shews it, which they to their Cost know that buy of those Strollers. Care must be taken not to wrap it in Paper, which being porous attracts Humidity, and moistens the *Crystal Mineral*, and renders it unsaleable. By the Experience I have had, the best Assurance you can have that it is good, will be to make it yourself.

Crystal Mineral is very much in use in Physick; it has acquired the Name of *Sal Prunellæ*, it is said, from its specifick Quality of curing Inflammations of the Throat, and the Quinsy, which some call *Pruna*, or *Prunella*; and, according to others, from the essential Salt which is drawn from the *Prunelle*, or *Sloe*, resembling *Crystal Mineral*; or because it is much made use of in inflammatory Fevers, compared to a Fire-coal, which the *Latins* call *Pruna*; or, lastly, and that most probably, because the *Germans* gave it, in making, the Figure of a Plumb.

Of Sal Polychrestum.

The *Sal Polychrestum*, so called from its many and great Virtues, is made of the finest Salt-petre and *Holland* Sulphur powdered together, and by means

means of a gentle Fire wrought into a very white light Salt.

This way of making it is very different from that of all Authors who have treated of it, who recommend a Crucible made red-hot by keeping a Fire about it for three or four Hours. I will not say this Process is not good; but the Impossibility there is of selling it when it is heavy, and of divers Colours, is the Reason why it cannot be disposed of when made thus: And I believe my Method will be preferred, since with two or three lighted Charcoals, and in the space of one Hour, a Salt may be made both white, bright, and well qualified; also more saleable, and that costs less. And since I disapprove the Ways of making the *Sal Polychrestum* hitherto used, it will not be amiss to declare the manner of succeeding best in it. Take therefore equal Parts of Sulphur and fine Salt-petre, and having heated a Crucible, not glazed in the Inside, and placed it upon five or six lighted Charcoals, so that the bottom be red-hot, throw into it a Spoonful of the Mixture of Salt-petre and Sulphur; and when the Detonation is over, and the Sulphur and Salt-petre are sufficiently burnt, another Spoonful in like manner must be thrown in, and so till all is calcined; then take the Pot off the Fire, and after it is cool break it, and therein you will find a *Sal Polychrestum*, both white, light, and very saleable. And what I say stands to Reason, since this Salt cannot be made heavy, and in a Mass, but by the great Violence and Strength of the Fire. They that would be still more curious, and would have a *Sal Polychrestum* purer and more beautiful, that is to say, crystallized, let them dissolve it in Water; and after having filtrated, and evaporated to a Pellicle, it must be put in a Cellar, or some other cool Place, to shoot into Crystals; which, when dried, ought to be in small Plates, moderately thick and brilliant, or shining like Diamonds, and of a clear White, and solid, that is, hard to break; for that which is easily reduced to Powder, is not well made.

This *Sal Polychrestum* crystallized, is preferable to the first sort, how well soever made, being free from that ungrateful Taste and evil Quality which the Sulphur, that is inseparable from the other by any other means, gives it.

In selling of this Salt there are great Cheats and Abuses committed; instead of it, many who trade in it, expose to sale only the Salt-petre itself melted and cast into a Mass: But it is easy to discover the Imposture, for as much as the true *Sal Polychrest* neither cracks nor flashes in the Fire, but will become red-hot; whereas the Counterfeit flames and crackles as Salt-petre itself, and is also

to be known by its exceeding Whiteness, and the cheap Rate it is sold at.

Sal Polychrest, as it comes out of the Crucible, or crystallized, was some Years since much in vogue in Physick; but at present being out of fashion (as there is a Mode in Medicine, as well as in every thing besides) is now seldom made use of, losing, as it were, its Virtue with the Opinion of the World. To say the Truth, those of our Nation love nothing but what is new.

This Salt has had the Appellation of fusible Sulphur or fixed Nitre given it, as *Penotus* describes at large, and which shews it to be no new Composition, since it has been known a long time by the Name of Fixed Nitre. It is aperitive, provokes Urine, and is good in Obstructions of the Liver, Spleen, and Mesentery; the Dose is from a Drachm to two Drachms.

Of the Antifebrifick Salt.

The *Sal Antifebrilis*, or Salt against Fevers, is made of the finest Salt-petre, Flowers of Sulphur, and distilled Urine, all mixed together, proceeding after the Manner directed in Treatises of Chymistry, whither the Reader may have Recourse. This *Antifebrifick Salt* is esteemed an excellent Remedy for Fevers, taken at the Beginning of the Fit, or upon the Return of it, from eight Grains to half a Drachm in any agreeable Vehicle.

Of Nitre Vitriolated.

Vitriolated Nitre is made of Salt of Nitre dissolved in Spirit of Vitriol; to which are attributed the same Qualities as to the vitriolated Tartar. It ought to be white, light, and in small *Striæ* or Needles, like *Sal Saturni*.

There is also a sort of Butter prepared of Nitre, by the means of Tartar; the Process whereof may be seen in Monsieur *Charas's* Chymistry, p. 853.

[The *Nitre* or *Natrum* of the Antients was entirely different from ours; and in all probability, our Salt-petre was wholly unknown to them, as their Nitre is at this Time almost unknown to us.

The *Nitre* of the Antients was an acrid alkaline Salt, found in *Egypt* and other Places, which made an Effervescence with Acids, was used in cleansing Cloaths, and making Glass, as also in Baths and Washes: It is evident that this was very different from our Salt-petre, and it is now in a manner unknown among us, though the Antients used it very much, both in Medicine and the common Occasions of Life; and even at this Time in the Fields of the *Lesser Asia*, near *Smyrna* and *Ephesus*,

Ephesus, the Earth rises of itself in the Spring and Autumn into small Hillocks like Mole-hills; from which the Inhabitants prepare a Lye for washing of Cloaths, and make a Soap from the Salt they get from it.

The *Nitre* of the Moderns, or Salt-petre, *Nitrum*, *Aldr. Mus. Met.* 321. *Worm.* 21. *Sal Nitrum*, *Sal Petrae*, *Mont. Ex.* 8. is a white crystalline Substance, of an acrid bitter Taste, with a certain Sensation of Cold, which concretes into long, small, and equally thick prismatick Crystals of six Sides, the outermost of which end in Points like Pyramids. It is easily soluble in Water, and melts by Fire without Deflagration. It is brought to us principally from the *East-Indies*, and is procured from Earth that has imbibed the Urine or Dung of Animals; and may be made artificially, by mixing Earth with Pidgeons or other Dung. It is also sometimes found naturally on old Walls, &c. not much exposed to Wet. All Salt-petre contains some Quantity of a kind of Sea-salt originally; and in the getting Salt-petre from the Earth that contains it, when they have boiled it in Water they let the clear Liquor stand to be quite cold before they set it to crystallize for the Salt-petre; and in the Vessels it has stood to cool in, which they call Settling Tubs, they find a Salt of the Sea-salt kind sticking to the Sides and Bottom; this they keep by itself, and call it Salt-petre-salt; and the Liquor, poured off into other Vessels called Shooting Trays, affords, by Crystallization, the Salt-petre.

15. Of Natural Borace.

THE *Natural Borace*, or *Tincar*, to which the Antients are supposed to have given the Name of *Chrysocolla*, is a Mineral Salt of the figure of the common *Sal Gem*, found in the Bowels of the Earth in many Places of *Persia*; and at the bottom of a Torrent, among the Mountains of *Purbeth*, in the Country of *Radzioribron*, that reaches to the Confines of the *White Tartary*. When this Mineral is taken out of the Earth, it is exposed to the Air, that it may contract a sort of fat reddish Rust, which nourishes and preserves it from being calcined, as it were by the Influence of the Weather; and when it is as it ought to be, the *Persians* carry it for the most Part to a Palace called *Amadabat*, from whence the *English*, *Dutch*, and we, have it; and this is what we call *Natural Borace*, or the unpolished, rough, or fat *Borace*, which some Workmen employ for the same Uses as they do the refined.

We have another sort of *Natural Borace* brought us, which differs only from the former, in that it is a little drier, and of a grey Colour, which proceeds only from its having been longer exposed

to the Air, whereby the reddish fat Substance, wherewith it is covered, becomes dry, and like *English Copperas* that has lain a great while above Ground. Those that have Occasion for one sort or the other of this *Natural Borace*, must take care that it be not mixed with Stones, or other such Refuse, as it frequently happens to be. The *Venetians* and *Dutch* make that which they send us under the Appellation of *Refined Borace*.

The Antients were not out when they said there was a greenish *Natural Borace*, no more than *Agri-cola*, who rightly enough observes, that he had seen a fossil Nitre, solid and hard, like a Stone, of which the *Venetian Borace* was made; But the same Author is very much mistaken, when he says, that then no *Borace* was in use but the factitious or artificial, made of the Urine of Boys that drank Wine; Brass Rust, and sometimes Nitre beaten together in a Bell-metal Mortar to the Consistence of an Ointment; which is far from Truth, since the *Borace* he means, and which we now sell, is only the fat *Borace* refined and shot into Crystals.

Borax, *Chrysocolla*, *Capistrum Auri*, *Auricolla*, or *Gold Flux Powder*, is a *Lemery*: Mineral Salt that has the Colour and Transparency of *Sal Gem*, but a great deal more Pungency; it is found in certain Mines of *Persia*, and several other Places: When they take it from the Earth, they expose it to the Air, where it becomes greasy and reddish on its Superficies. This is that which is called *Fat Borace*. This Fat covers the Salts, that they cannot be penetrated and dissolved, or melted by the Air. There is likewise found a grey or greenish *Borace*, which Colours proceed from the various Impressions, that the Air being hotter or colder makes upon the Salt, by opening it more or less.

The *Venetians* and *Dutch* purify or refine their *Borace* as they do other Salts, by dissolving in Water, filtrating the Dissolution, leaving it afterwards to evaporate, and setting it to crystallize. They bring us this *Borace* under the Name of *Borace* refined. Chuse your *Borace* in fine white Pieces, neat, crystallized, and transparent. One may, by refining, separate from *Borace* a vitriolick Matter, which gives it a great deal of Sharpness; for which Reason the refined *Borace* is much softer than the natural, and ought to be preferred in Medicine: It is incisive and penetrating, proper to open the Obstructions of the Glands of the Mesentery, and dissolve the *Schirrus* of the Liver and Spleen; the Dose is from four Grains to twenty. They also use it externally to consume the Excrescences of Flesh. They may draw a Spirit from *Borace* like that of Alum, by a very strong Fire; it is aperitive, and very like Spirit of Salt: It is called

called *Chrysocola*, *Gluten Auri*, *Capistrum Auri*, and *Auri colla*, because the Goldsmiths use it to flux and solder Gold with.

Of Refined Borace.

Pomet. As Natural Borace is found of different Colours, sometimes greenish, and other whiles yellowish; the *Venetians*, who were the first that brought Borace into Vogue, finding it could not be well made use of with its natural Fatness and Unctuousity, considered of a way of purifying of it, by dissolving it in Water; then filtrating and crystallizing it, in order to which they made use of Cotton Matches, upon which the Borace is crystallized, after the same Manner as Sugar-candy or Verdigrise on Sticks or Splinters of Wood.

As for others that do not use Cotton, they reduce the Borace into little Stones of the Form and Figure of the Tag of a Lace, or Point; but as this sort of Borace had a greenish Cast, the *Dutch* have taken it to Task, and made it whiter and more vendible, and reduced it into larger Pieces, which is what we sell at this Day.

Borace, whether it be the *Venetian*, or that of *Holland*, ought to be chosen clear and transparent, of Taste almost insipid, taking Care that it be not mixed with *English Alum*, which is difficult enough to discover, if the Alum has been soaked in Water, and then exposed a few Days to the Air, to give it the natural rough Appearance of Borace; but this Cheat may be easily found out, if you will put it to the Test: For, first, it will by no means solder Metals; nor, being put upon lighted Charcoal, will it swell and heave like Borace.

Refined Borace is much in Use by a great many sorts of Workmen, and serves as well to solder, as to melt and dissolve Metals: Some use it also in *Fucus's*. It is of some Use too in Medicine, as it is incisive and penetrating, proper to open Obstructions of the Liver, Spleen, and Mesentery, and to promote the *Menses*; the Dose is from five Grains to twenty.

[Borace is the Borax, *Charlt. Foss. 9. Dougl. Ind. 18. Nitrun factitium, Arabice Borax, Worm. 21. Nitrum unde Borax excoquitur, Aldr. Mus. Met. 324.* Both the native and refined are common in the Shops; the native is brought to us in Pieces about the Bigness of a Walnut, fowl and earthy, and of a dark green Colour, and greasy. It is had from *Persia* and other Places, where, in Copper Mines, they find a greenish turbid Water, which they evaporate to a proper Consistence, and afterwards make to a Paste, with the Slime and Mud of the Springs it runs from, and some Quantity

of Animal Fat. This Paste they bury for some Months in the Earth, after which, opening the Pits, they find the Water concreted into knobby Substances, which dug out of the Pits, with the fat Earth about them, are the *Native Borax*.

The *Refined Borax*, which is what we most commonly sell, is the native Kind purified by a *Lixivium* of Quick-lime. We formerly had it from *Venice*; but now the Trade of refining it is almost entirely in the Hands of the *Dutch*.

This is the Borax of the Shops at present; but it is evident, that it is very different from the *Chrysocola* of *Dioscorides* and *Galen*, which was a green metallick Substance, found sometimes like a loose Sand, and sometimes adhering to other metalline Matters, and was a kind of native Verdigrise, not soluble in Water, which, taken inwardly, always proved Emetick, and sometimes poisonous. They had also, beside this native *Chrysocola*, two factitious Kinds, the *Herbacea* and *Santerina*: The *Herbacea* was made of the native *Chrysocola*, bruised, calcined, and macerated in Vinegar, tinged with *Luteola*, or Dyers Weed; and the *Santerina*, of *Cyprian Verdigrise* and Urine, with the Addition of *Nitre*. These, it is plain, must also be very different from our Borax; but whether the *Tincar* of the *Arabians* differs from it or not, is not easy to determine, as none of it comes to our Hands.

Our Borax is a fixed alkaline Salt, something of the Nature of Salt of Tartar; but differing from it in this, that it unites with Acids without Tumult. It yields nothing in Distillation but an insipid Phlegm: A Solution of it turns Syrup of Violets green; and a Solution of corrosive Sublimate to a Saffron Colour.]

16. Of Alum.

ALUM is a fossil Salt drawn from *Pomet.* Stones of different Bigness and Colour, in several Parts of *Europe*, especially in *Italy*, *England*, and in *France*. After Alum Stone is taken out of its Bed or Quarry, as you take other Stones, it is burnt in a Kiln made on Purpose as you do for Lime, or the like; and when it is calcined, its Salt, which is the Alum, is drawn out with Water, proceeding after the same Manner as in making Salt-petre. A certain Person in the World, in the Presence of a Man of Worth, maintained, that Urine was made use of instead of Water in drawing this Salt; but since his Authority is not sufficient to make him credited, I chuse rather to rest satisfied with what *Matthiolus*, upon *Dioscorides*, has written of it, who having been an Eye-witness of the Fact, has given us an ample Descri-

Description of it in his Book, Page 733. to which my Reader may have Recourse.

We commonly sell six sorts of Alum, to wit, the Plumous Alum, or Earth Flax; the *Roman*, *English*, *Liege*, Burnt Alum, and the Sugar Alum. As for the Round, Liquid, and Black Alum I know nothing of them.

Of Plumous Alum.

Pomet. *Plumous Alum* is a Mineral found in the *Negropont*, which some will have to be the Stone which the Antients called *Lapis Amiantus*; but as I am not sure of the Thing, I will content myself to say, that the *Plumous Alum* which we sell, is a sort of thready Stone, of divers Colours, but most commonly of a greenish white, in Figure pretty much resembling *Venice Talc*, excepting only that it is not so green nor shining; and instead of parting into Scales, this rises in white soft Threads or Filaments, like the Feathers of a Quill, from whence comes its Name; and accordingly most Part of the Plumous or Feather Alum one meets with, is almost ever in small Fibres, and but little in Stone, proper to spin and make the perpetual Matches. This *Plumous Alum*, to which some have given the Name of that of *Sicily*, is of very little Use in Medicine, and at present it is almost of no Use, since the Secret of drawing it out into Threads, or spinning it, has been lost. The Cloth made with this sort of Alum when dirty, to be made clean, needed only to be thrown into the Fire, and it would come out thence as white as Snow. And with this sort of Cloth did the antient *Romans* preserve the Ashes of their Emperors, and separate them from those of the aromatick Wood, wherewith their Bodies were burnt. Some People, at this Day, also make use of this *Plume Alum*, instead of Cotton, to make Matches; and to that End it ought to be in long Wicks, and as soft as possible. This *Alum* is a strong Corrosive, or Escharotick; for what Part soever of the Body it touches, it causes Whelks and Blisters, and a most intolerable *Pruritus* or Itch, which is to be appeased only, that I know of, by anointing the Part with Oil of Olives. Besides this *Plume Alum*, we begin to sell a certain Stone Mineral, ponderous, white, woolly, and, in a word, wholly like to *Plumous Alum*, and incombuftible also, wherefore it has obtained the Name of *Asbestos*, which in *Greek* signifies incombuftible; and by Corruption we call it vulgarly *Albestes*.

This Stone is found in many Places in *France*, more especially in the County of *Foyx* in *Gascoign*, where there are Quarries out of which Stones of a surprizing Magnitude are taken, and from which

Cotton Threads may be drawn fit to make Cloth, and to endure whitening or cleansing in the Fire, like that of Feather *Alum* already spoken of. And besides this, there are found in *France* (particularly about the *Pyrencees* in the Valley of *Campan*, near the Stone Quarries, about three Leagues from *Grippa*) certain Plants about two Feet high, which have Stalks all as it were silvered over, their Leaves like those of a Nettle, excepting only that they are white underneath, of a dark green at Top, and resembling Shagreen. This white Stalk steeped in Water, like Hemp, may be run into a long and round sort of Flax or Tow, of which good Cloth may be made, that will resist the Fire like *Plumous Alum*, only it will not whiten so well. And it is to be remarked, that when this Flax is put into the Fire, it immediately grows red, but black if applied to a Candle. Perhaps what I say may not easily meet with Credit; but since I have some of it in my Possession to shew to those who would not believe, and the Person who has collected it is still in Being, and a Man of Reputation and Fidelity, I thought it might not be amiss to advertise the Publick, that *Plumous Alum*, and what we call the *Asbestos*, are not the only Drugs in Nature capable of enduring or resisting the Fire.

This incombuftible Plant might be called *Asbestos*, and the Tow that comes of it *Incombuftible Flax*, being long, large, and soft, like Flax.

Alumen Plumum, sive Alumen Scissile, or Feathered Alum, is a kind of stringy *Lemery*. Talc, like the Feathers of a Quill, whence they call it *Feathered Alum*. It is very soft to the Touch, of a white, greenish, shining Colour, is produced in the Mines of *Negropont*. It will neither flame nor consume in the Fire. Some Alchymists use it for Wicks in their Lamps; it is called *Scissile*, because it is easy to break and divide.

Of Alum of Rome.

Roman Alum, which we also call Alum *Pomet.* of *Civita Vecchia*, because great Quantities are made in the Neighbourhood of that City, is a Stone Alum of a middle Size, red without, and within, clear and transparent, and of a disagreeable styptick Taste. This Alum is of a reddish Colour; the Mine from whence it is drawn being of the same.

Chuse the *Roman Alum* that is reddish throughout, in the Inside as well as the Outside, because there are some who colour the *English* and *Liege* Alum of a dark Red, but the Cheat is easily discovered; for if you find it not as red within as without, it is a Sign it is counterfeited. It ought to be as free of small or broken Pieces as possible; which

which yet is no Disadvantage to those who use it, provided the Alum be pure and genuine, but only to such as retail it.

Roman Alum is much in Use with Dyers, Tanners, and those that make counterfeit Pearl, but it ought to be very good for all of them.

Of English Alum.

English Alum, to which the Antients have given the Name of *Rock* or *Rock Alum*, White and Glafs Alum, is an Alum clear and transparent as Crystal, which is sent us from *England* in Pieces of different Figure and Bigness; since sometimes it is to be met with in Lumps as big as a Man's Body, sometimes clear and white as Crystal, and at other Times blackish and moist: In fine, the Glafs Alum is more or less beautiful, according as it has been more or less purified.

As this Alum is much made use of by several sorts of Trades, particularly by Mint-men or Coiners, and Dyers; as also for many Preparations in Physick, Care ought to be taken in the Choice of it, that it be white, clear, and transparent, as dry and as free from any sort of Filth as may be: Also Care must be had that it be not *Liege* or *Meziere* Alum, which is greasier and fatter than that of *England*, and not so fit for Dyers Use, and which they never make use of but for want of the true *English*. We had not long since a greenish sort of Alum, like Salt-petre, drawn from a Stone taken out of the Mines in the Neighbourhood of *Soissons* in *Picardy*; but as this Alum is of no Account, as well by reason of its ill Looks, as because we continue ignorant of its Virtues, I shall say no more concerning it. From the *English* Alum is distilled a clear and acid Water, which we call Alum Water, and which is used as an Ophthalmick. After the Phlegm comes over an acid Spirit, useful in Fevers, whether continual or intermitting; and also good against small Ulcers or Excoriations in the Mouth, from four to eight Drops; that which remains in the Vessel being a light white Substance or Mass, is what we call Burnt Alum: But as this Water and Spirit of Alum are in little Request, those that have Occasion for Burnt Alum do not trouble themselves about distilling, but only put *English* Alum into a Pot, which they place in the midst of a good Fire; and when the Alum is become very light and white, they take it out and keep it for Use.

Calcined or Burnt Alum ought to be light and friable, that is, easily reduced to Powder; so that Care must be taken that it be not such as has been passed through a Silk Searce or Sieve, which is put into a Bag tied close, to make it into Stones

or Lumps; but this Cheat is easily discovered, the counterfeit Alum being heavy, extremely white, more like Paint or Plaister than any thing else, and of a styptick Taste.

True Burnt Alum is esteemed a very good Escharotick to eat away proud luxuriant Flesh. Persons of Distinction commonly wear it in little Bags under their Armpits and their Feet, to prevent sweating, but then it ought to be extremely fine.

Of Saccharine, or Sugar-like Alum.

Saccharine Alum, because it resembles Sugar, is made of *English* Alum, Rose-water, and Whites of Eggs, boiled together till it is stiff; and this Alum so boiled, and reduced into a Paste, what Figure or Form you please may be given to it; and when it is cold, it becomes as hard as a Stone.

Some make this Sugar Alum enter into the Composition of their *Fucus's*.

There are, moreover, other sorts of Alum, namely, that white transparent Stone, in every particular almost like Rock Crystal, to which the Name of *Scayolle Alum* is given; the *Lapis Specularis*, which is found in the Quarries of *Passy*, and which, after it is calcined, is of a very beautiful White. Not long since, great Quantities of this were found in the clayey Earth of *Passy*. Others make use of another sort, which we call *Gip* or *Plaister*. Pot-ashes also have obtained the Name of *Alumen catinum*, as is observed in its Place.

Some say the Name of *Alum* is derived from the *Latin Lumen*, which signifies Light.

Alumen, or *Alum*, is an acid mineral Salt, made from a kind of Stones of *Lemery*. different Sizes and Colours, which are found in the Quarries of *France*, *Italy*, and *England*. They calcine this Stone, and then make Alum of it by Solutions, Filtrations, and Coagulations, as they make Salt-petre. There are several sorts of it, as *Roman Alum*, *Rock Alum*, and *Sugar Alum*.

The *Roman Alum*, or that of *Civita Vecchia*, called *Alumen Romanum*, is a Salt in Stones of a moderate size, that are reddish within, of an acid styptick Taste; they use it outwardly for stopping of Blood, and inwardly in Gargarisms for Inflammations of the Throat, and to clean the Teeth; they dry it or calcine it upon the Fire to free it from its Phlegm, then it is called *Burnt Alum*: This is an Escharotick, and serves to eat away proud Flesh, dissolve Excrescences, and open Ulcers and Shankers.

Rock Alum, White or *English Alum*, called *Alumen Rupeum*, or *Rock Alum*, is a Salt in large great Lumps,

Lumps, that are clear, white, and transparent as Crystal, which is brought from *England*. This *Alum* has the Virtues of the former, but is not so strong: The Dyers, &c. use it. The *Alum* called *Alumen Saccharinum*, or *Sugar Alum*, is a Composition made with Roch Alum, Whites of Eggs, and Rose-water, boiled together to the Consistence of a Paste, and formed, while hot, into little Cakes like Sugar-cakes, whence it takes its Name. *Alumen Catinum*, or *Dish Alum*, because it is made in a Platter or Dish, is what we call *Pot-ashes*, or the *Ashes of Kali* calcined, or some other Ashes, or *Alkali Salt* made from Vegetables. They call it *Catinum*, because they used to dry it in a Plate or Dish.

[*Alum* is a Salt either natural or artificial; the natural *Alum* of the Antients was either liquid or solid. Of the liquid, there are two Kinds mentioned by the Antients, one pure, and the other impure. The first was very common, and was a smooth milky Substance, always moist; the other rough and foul. The solid they distinguished according to its Figure into fissile and round: The fissile was either in Form of a compact uniform Glebe, or divided into Filaments; the round of a more loose Texture, with the Appearance of Bubbles upon it, or full of Holes like a Sponge; or else consisting of *Strata*, loosely laid on one another.

The artificial or factitious *Alums* are distinguished by the Countries where they are made. They were wholly unknown to the Antients, though with us they are the only kinds in Use.

The kinds of *Alum*, kept at present in the Shops, are three.

1. The Common *Alum*, *Alumen rupeum candidum et pellucidum*, *Ald. Mus. Met.* 324. *Alumen rupeum sive Crystallinum*, *Ind. Med.* 7. This is procured with us from a Species of Stone or Ore burnt, and afterwards boiled with the Addition of Urine and *Kali*, or other Sea Plants. It is got in other Places by the Evaporation of Mineral Waters; and in some others is found in natural Veins in the Earth.

2. The *Roch Alum*, the *Alumen Romanum sive rubrum*, *Ind. Med.* 7. *Alumen Rupeum seu Rochæ*,

Charlt. Foss. 9. *Alumen Rochæ*, *Worm.* 23. This is like the former, but reddish; and is brought to us from *Italy* and *Smyrna*. It is made as we make the common *Alum*, by burning the *Alum Stones*, and boiling them; but without the Additions of Urine, &c.

3. The *Plumose Alum*, *Alumen plumbeum seu Trichites*, *Schrod.* 3. 477. *Alumen Plumæ quod Scissile Latīnis*, *Aldr. Mus. Met.* 331. This is light, and composed of Filaments; it is soluble in Water, and melts in the Fire; therefore is evidently different from the *Asbestos*, with which it has for many Ages been confounded by a Number of Authors.

Alum is a powerful Astringent and Drier; the natural *Alums* have a weak Smell of *Aqua fortis*; the factitious have little or no Smell. A Solution of *Alum* curdles Milk, turns an Infusion of Galls turbid and whitish; concretes with Salt of Tartar into a white *Coagulum*, without any sensible Heat or Smoke; and when the Mixture is made with *English Alum*, an urinous Smell is perceived from the Urine used in its Crystallization.

Alum, by a chymical Analysis, yields an acid Spirit, like that of Vitriol, but not strong, nor in any great Quantity; for the astringent Earth, that is the Basis of *Alum*, retains the acid Salt so firmly, that the Fire cannot separate them; and the *Residuum* of the Distillation will crystallize into *Alum* again, if dissolved in Water. Hence it is evident, that *Alum* consists of an acid Salt of the Vitriolick kind, and an astringent Earth very closely united together.

The *Asbestos*, or *Earth Flax*, is the *Amianthus sive Asbestos*, *Ind. Med.* 8. *Lapis Amianthus*, *Matth.* 1387. *Lat.* 118. It is remarkable for bearing the Fire unhurt; but is never used in Medicine.

As to the vegetable *Asbestos* of our Author, I judge him to be a Man of great Veracity, therefore cannot think he would propagate a Falshood knowingly: But I suppose he was imposed on by the Person who pretended to have gathered what he gave him from a Plant.]

BOOK IV.

OF BITUMENS.

P R E F A C E.

The Word Bitumen properly signifies a fat, sulphureous, inflammable Matter, which is found of different Colours and Consistence, either within the Earth, or upon it, or swimming upon the Face of the Waters. Of these we have several Sorts, some hard, others soft, and some liquid, like Oil. The hard Bitumens that we sell, are the Yellow Amber, Black Amber, or Jet; Jews Pitch, natural and artificial; Pit Coal, Kennel Coal, or Black Stone, and Sulphur. The soft Sorts are Naphtha, the Bitumen of Colao, of Syrnem, and Copal Bitumen. The liquid are Naphtha of Italy, and the Petroleum, or Rock Oil. Of all which hereafter in their Turns.

1. Of Amber.

Pomet. **A**MBER, to which the Antients have given the Name of *Succinum*, or *Carabe*, is a Bitumen of different Colours, being either white or yellow. This Bitumen is liquid when it is in its natural Place of Production; but as it comes from thence, it hardens, and becomes such as we see: And as it passes from its Recesses in the Earth, in a State of Fluidity, swimming upon the Waters, it is apt to carry with it what is in its Way; which is the Reason we find many extraneous Bodies in our Amber; also not hardening all at once, but by Degrees, a great many Insects stick to it, and there die. Most of the *Yellow Amber* we have is found upon the Banks of certain small Rivers, running into the *Baltick Sea*, in the *Ducal Prussia*. It is also found upon the Sands, which have been cast up by the Winds, and is a Commodity which brings no inconsiderable Profit to the King of *Prussia*, for he raises above 20,000 Crowns *per Annum* from those Places where it is found, over and above the great Charge they are at in securing and preserving it from others; so that it necessarily follows, that this *Yellow Amber* yields a yearly Rent of more than 100,000 Livres.

What I say may, perhaps, seem strange to those who do not know the great Use there is of Amber in *China*, and amongst the *Savages*, as well as in *Europe*; but the greatest Consumption of it is in

Austria, *Germany*, in *Poland*, and in the Neighbourhood of *Venice*; and the *Venetians* were the first that brought it into such a Vogue and Fashion. thereabout, there being few People in *Lombardy*, or all along the *Po*, but wear Amber Necklaces, believing they keep them from Quinsies, and other ill Effects of the Neck and Throat, to which they are very subject, by Reason of the bad Waters they are forced to drink in those Parts: History also informs us, that the *Romans* made such Account of it, that *Nero* caused great Quantities of it to be imported; but no where is Amber more esteemed and valued than in *Poland* and the *Lower Hungary*, a pretty handsome Piece, without Fault or Flaw, being there as valuable, and preferred even to Gold; such Lovers and Admirers of this Commodity are they. As for *France*, it is by no means so much in Esteem there, though it was not many Years ago that all People of Quality and Fashion wore Necklaces of it; but at present it is become so vulgar, that none but Servants make use of it. Besides the great Use of *Yellow Amber* for Trinkets, &c. it is of Use in Medicine, not only to powder, but to draw a Tincture, a Spirit, volatile Salt, and an Oil, from, and to make a Varnish with Spirit of Wine.

Amber ought to be clear and transparent, capable of attracting Straws, whence comes its Name of *Carabe*, which in the *Persian* Language signifies draw Straw. When it is designed for any Piece of Workmanship, or to powder, it should be white;

white; but when it is to undergo the Fire, it matters not of what Colour it be, provided it is genuine *Amber*; for there are a great many that sell the *Copal* of *America* for it, but it is easily distinguished from it, the *Copal* being in Pieces of the Bigness and Figure of Gum Araback, and the true *Carabe* ordinarily in great Lumps, and also most commonly in a sort of Film or Skin, which serves as a kind of *Matrix* for it; and then again *Amber* burnt at the Candle sends forth an exceeding strong Smell; and moreover, as hath been noted, will attract Straw, which *Copal* will not do. Some have assured me that *Yellow Amber* is counterfeited with Turpentine and Cotton, or with Yolks of Eggs and Gum Araback: But as this sort of false *Amber* would be worth little or nothing, I cannot conceive how any one need fear its being adulterated with those Things.

Amber is powdered upon a Porphyry, and reduced into Cakes, which are of some Use in Physick, particularly to restrain Spitting of Blood, and to stop Dysenteries and other Lasks; Dose from ten to thirty-six Grains in any appropriate Vehicle. Also from Powder of *Amber*, with Spirit of Wine, is drawn a yellow Tincture, endowed with a great many good Qualities, especially in apoplectick and epileptick Fits, and paralytick Cafes, taken from ten Drops to a Drachm in any agreeable Liquor: Some dissolve pure fine Camphire in this Tincture to make what Monsieur *Soleysel* calls the *Flaming Balsam*, and recommends for Wounds, Bruises, or cold Humours in Horse or Man, which may be seen described in his Book, Page 274.

Karabe, *Succinum*, *Electrum*, *Ambra Lemery*. *Citrina*, or *Yellow Amber*, is a hard Matter, like a Stone, yellow, citrine or white, of a fine, shining, transparent Colour, that is brought from the *Ducal Prussia* in Pieces of different Shapes and Sizes: This *Amber* is thrown by the Waves of the *Baltick Sea* up the Rivers of *Prussia*, especially by certain Winds. They likewise find both the liquid and solid on the Banks of several little Rivers, and upon the Brooks that are about the same Sea; that which is liquid, hardens in a little Time, and becomes solid as the other.

Opinions are divided upon the Nature and Origin of *Amber*. The Antients believed that it was a Mixture of Gum and Resin that flowed from Poplars, Pines, or Firs, which being confusedly carried by the Winds into the *Baltick Sea*, incorporated with the Salt, and was elaborated or worked up, and then thrown by the Waves upon the Banks of the Rivers. This Notion is rejected by the modern Authors, who have all writ that *Succinum*, or *Amber*, is a *Bitumen* or Juice of the Earth, which the Sea has raised up, and the Waves

thrown ashore about the *Ducal Prussia*, where it is formed, and hardens after the Manner we see it in. I myself followed this last Opinion in my Book of Chymistry: But as I have been convinced since by several Circumstances, I have changed my Opinion, and found that the Thoughts of the Antients, on this Subject, were preferable to those of the Moderns: For first of all, Travellers know that about the *Baltick Sea*, on the Coast of *Sweden*, there grow abundance of Poplars, Pines, and Firs, from which there flows in Summer a great Quantity of Gum and Resin, which is partly blown into the Sea by the Winds.

In the next Place, the Substance, the Colour, and the Transparency of that resinous Gum, resemble much those of *Amber*; for we have *Gum Copal* brought us that flows from Poplars, in the *Antilles Isles*, and has no other Elaboration than what it receives from the Torrent of the Water in the Rivers, from whence they take it, as has been said in its proper Place; and it is so like *Karabè*, that those who know it not well may easily be deceived; from whence it is called, *Falsè* or *Counterfeit Karabè*. *Amber* indeed is something harder, of a higher Colour, more transparent and resplendent than *Gum Copal*, but these Perfections come from the Salt that is mixed in it, a long Fermentation and Working it meets with in the Sea, besides the Mixture of the Pine Resin with the Resin of Poplar, &c. In the third Place, the Principles that are drawn from the true *Karabè* by Chymistry, are likewise those that are taken from *Gum Copal*.

Chuse your *Amber* in fine, large, hard Pieces, clear and transparent, that will attract or draw to itself Straws, and several other little light Bodies, when the *Amber* is rubbed in your Hand, or otherwise, and applied near the same. The white *Karabè* is preferable to the yellow, but the Difference is not considerable: They use both sorts to make Necklaces, Bracelets, and little Cabinets, with several other Nick-nacks that are carried into *Persia*, *China*, and *Turkey*, where the Natives esteem them as great Rarities. They likewise make *Amber* Necklaces in *Austria*, *Germany*, in *Venice*, and sometimes in *France*.

In Pieces of *Amber* there are sometimes found Spangles, Leaves of Trees, or little Insects; as Spiders, Ants, Flies, &c. This Circumstance has given Occasion to Naturalists to enquire how these little Bodies become inclosed in the *Amber*; and it appears to me that the Difficulty is easy to resolve, since from the Opinions given, touching the Nature of *Amber*, it has been thought necessary to admit that the Substance of it was some time liquid or soft before it hardened; that during that

Time

Time, these small Bodies adhered to it, as to Glue, and were wrapped up in it, or rather were covered and enclosed therein by the Addition of fresh Matter of the same kind; so that when the Whole was hardened, these little Bodies remained wholly embalmed, as we now see them.

The *Karabè* contains in it a great deal of Oil and volatile acid Salt; it stops the Flux of the Belly, Hemorrhage, and *Gonorrhœa*, and resists Poison: The Dose is from ten Grains to half a Drachm; they likewise burn it over the Fire to receive the Fume of it, which checks the Violence of Rheum from the Head, and Catarrhs. *Karabè* is a *Persian* Name that signifies *draw Straw*; and they have given this Name to *Amber*, because it attracts Straws, especially when it has been a little rubbed in the Hand. The Reason of that Effect proceeds from this, that the subtil and insensible Particles of the Matter having been put into motion with some kind of Heat that follows the Friction, they emit on all Sides their *Effluvia*, and scatter them in the Air within their Circumference; but as they lose their Motion according to the Distance they are from their Center, they become so much weaker, and are on all Sides repelled by the Air; and in their Return they stick, by their Viscosity, to a Straw, or any other light Body they meet with in their way, and drag it along with them. The same Effect happens to several other Substances, which are rubbed after the same manner, as Wax, Suet, and divers Gums. This is called *Succinum*, from *Succus*, because it is supposed to be the Juice of the Poplar, or of the Earth.

Of the Spirit and Oil of Amber.

Pomet. From *Amber* grossly powdered, put into a Glass or Earthen Retort, may be drawn a reddish Spirit, and greenish fetid Oil.

The *Spirit* of *Amber* is esteemed an excellent Aperitive or Deobstruent, and very good against the Scurvy, taken in any Liquor, from ten to twenty-four Drops.

As for the *Oil*, it is chiefly in use to allay and drive down Vapours, being put upon Silk or Cotton, and rubbing the Wrists, or Pulse, or Nose therewith. If you would have this *Oil* of a fine clear reddish Colour, you have nothing to do but to mix with it a little Earth or Sand, and to distil it again.

Those that would have a volatile Salt, or *Spirit*, or *Oil* of *Amber*, may perform all the three Operations very well with a Glass Retort and a Sand-heat. As for the volatile Salt, if you find it not good and fine enough, you need only put it into a small Vial or Glass Bottle, and sublime it upon a gentle Fire, taking care to keep it well

stopt; for this is a ticklish Commodity, that will evaporate and lose itself in the Air, and that which you will find in the Retort, is of a fine shining Black, resembling the *Bitumen* of *Judæa*, or *Jews Pitch*.

[*Amber* is the *Succinum*, *Worm*. 31. *Charlt. Foss.* 14. *Ald. Mus. Met.* 403, &c. It were almost an endless Work to recount the various mistaken Opinions about the Origin of *Amber*, but the true Account of it is, That it is a bituminous mineral Juice, formed in the Bowels of the Earth, liquid at first, but afterwards concreted into a hard stony Substance; for in several Parts of *France*, especially in *Provence*, it is dug out of the Mountains, as likewise in *Italy* and *Sicily*; but all this is of the dark and least valuable kind; the best is found in *Prussia*, where it is of two kinds, one dug out of the Earth, and the other found on the Sea-shores, which is of the same nature with the former. *Hartman*, who has wrote an accurate History of *Amber*, is of opinion, that all *Prussia* and *Pomerania* stand upon a Bed of it, because it is always met with there, in digging Pits, in great Quantities, and sometimes very near the Surface of the Earth. The chief *Amber* Mines are near the Sea-coast of *Prussia*; and from the Shore where they are situated, a Hill rises, made up of a cortical Substance like the Barks of Trees, piled one on another; under this is found a Stratum of a kind of fossil Wood, which *Hartman* believes to be the Matrix of *Amber*; because a great Quantity of it is contained in the Veins of this Wood; and wherever *Amber* is found by digging, this Substance is always found.

The *Amber* which is gathered on the Sea-shores comes from the succiniferous Hills, beat to pieces by the stormy Sea, and washed on the Beach.

As for the Choice of *Amber*, it should be according to the Use it is for; if it be to make the *Oil* the Yellow is properest, because it contains most; the White has less Oil, and therefore is to be chosen, if wanted, for the volatile Salt; the Brown is loaded with Earth, therefore not to be used on any Occasion but in want of the others.]

2. Of the Black Amber, or Jet.

JET, which, with good Reason, may *Pomet.* be called *Succinum Nigrum*, or *Black Amber*, is also a sort of *Bitumen*, found in the Bowels of the Earth; it is a sulphureous Fossil, very hard, and of a glistering or shining Black, found in several Places of *Europe*, as well in *Germany* and *Sweden*, as in *Ireland*; as also in *France*, between *St. Beaume* and *Toulon*; and in *Ireland* it is so common, that as you go along you may see
Veins

Veins of it running through the Stones and Rocks. Some Authors are of opinion, that *Jet* is the *Yellow Amber* divested of its Oil, drawn out by the subterranean Fires, and that from thence proceed *Naphtha* and *Petroleum*; which does not seem very repugnant to good Sense.

Jet is of a like Use with *Yellow Amber* for Ornaments and Decoration; but in Medicine it is only made use of for its Oil, which serves for the same Purposes as that of the other.

As to the Choice of it, it is sufficient to be of a shining Black, as the Proverb bespeaks it.

Gagates, in *French*, *Gest*, *Jays*, or *Lemery*. *Jayet*, and in *English*, *Jet*, is a bituminous Stone, that is hard, black, and smooth, found in several Parts of *Europe*, as *Germany*, *Sweden*, *Provence*, and *Ireland*, in the Stone Quarries amongst the Rocks; it yields a good deal of Oil, and a little volatile penetrating Salt.

Some People are of opinion that *Jet* is an *Amber* whose volatile Parts have been separated by the subterranean Fires, and become what we call *Petroleum*. Chuse such as is neat, hard, and of a fine shining Black; it discusses, is emollient, expels Wind, and allays Vapours. The Dose from a Scruple to a Drachm. The Name comes from *Gaga*, a River and City of *Lycia*, from whence *Jet* is sometimes brought.

[*Jet* is the *Lapis Gagates*, *Charlt. Foss.* 14. *Gagates*, *Worm.* 31. *Aldr. Mus. Met.* 418. It is a crustaceous and almost stony fossil Substance, much like the Cannal Coal in Appearance, but differing from it, in that it has a bituminous Smell, is harder, and burns almost like Pitch, sending out a thick black Smoke. It had its Name, *Gagates*, from *Gage* or *Gagis*, a Town in *Lycia*, from which it used to be brought, but is now too common to need sending so far for.]

Of Jews Pitch.

Pomet. **T**HE *Jews Pitch*, or *Asphaltum*, is a *Bitumen*, solid, brittle, and black, something resembling black Pitch, inflammable and sulphureous, found swimming upon the Waters of the Lake where heretofore stood the Cities of *Sodom* and *Gomorrhah*, called the *Dead Sea*, or *Lacus Asphaltites* (from whence also it has its Name of *Asphaltum*) the Word *Asphaltites* signifies the Lake of Assurance, being so very strong, that every thing almost swims that is thrown into it; and it is called *Mare Mortuum*, or the *Dead Sea*, because no Fish or other Beast can live in it, through the extreme Saltiness, Bitterness, and noysome Smell of its Waters; but, in Recompence, there are great Quantities of this *Bitumen* found floating thereup-

on like Grease or Fat, of which the Coasters, who are *Arabs*, make very considerable Advantage; it being what they used to lay upon and besmear their Ships and Boats with, as the Northern Nations do with common Pitch: And one Thing is very remarkable, that when this Lake is very full of this *Bitumen*, there arises such a Stench in the Air, that the Inhabitants thereabout are necessitated to gather it and put it ashore; and so noysome at that Time is the Smell, that all Birds that fly over it fall down dead; and this is the Reason why the People in the neighbouring Places are so short lived.

The *Bitumen* of *Judæa*, or *Asphaltum*, so much resembles the best black *Stockholm Pitch*, that were it not for the strong Smell of Pitch, and that it is not so hard as the *Asphaltum*, no one could distinguish the one from the other.

The principal Use of this *Bitumen* is to make the fine shining Blacks of *China*: It is also of some Use in Medicine, for that it enters the Composition of the *Venice Treacle*; for which Purpose it needs no other Preparation than to be true or genuine, that is to say, of a most beautiful, shining, polished Black, reflecting the Image of the Sun, and of no manner of Smell: See that it be not adulterated, or mixed with *Black Pitch*, which is what is called the *Artificial* or *Fæitious Pissasphaltum*; it is no difficult matter to discover this artificial *Bitumen*, being of a very base Black, and a strong Smell. It is a Mistake to believe, as some Authors do, particularly Monsieur *Furitiere*, that we have no *Bitumen* of *Judæa* brought us now-a-days; and that the Apothecaries, instead of it, sell a Composition which they make of *Pitch* and the *Oil of Petre*; a thing that does not stand to Reason, nor can I conceive Apothecaries to be such Knaves and Fools to do any such thing, since the true *Bitumen* is reasonable enough in its Price: So that it would have been better for these Scriblers, and all such as have undertaken to write of Drugs without understanding them well, to have been silent; for they have made, and still do make, horrid Blunders about *quid pro quo*, or in substituting succedaneous Drugs or Medicines; which is a Matter that much concerns the King and Commonwealth.

Bitumen Judaicum, *Bitumen Babylonicum*, *Asphaltus*, is a solid, brittle, *Lemery*. black Matter, resembling *Black Pitch*, that is sulphureous and inflammable, and in burning sends forth a strong disagreeable Smell: It is found swimming upon the Surface of the Lake, or *Asphaltite Sea*, otherwise called the *Dead Sea*, where stood some time the Cities of *Sodom* and *Gomorrhah*. This *Bitumen* is cast up from time to time, in the Nature of liquid Pitch, from the Earth that

that lies under this Sea, and being thrown upon the Water, it swims like other fatty Bodies, and is condensed by little and little through the Heat of the Sun and the Salt that is in it.

The Inhabitants of the Country are constrained to take it from thence and carry it ashore, not only because it brings them Profit, but also because the Lake being too much loaded with this *Bitumen*, yields a stinking and malignant Smell, which spoils the Air, affects their Health, and shortens their Days: The Birds that fly a-crofs it fall down dead; and it is called the *Dead Sea*, because of the Stench, Bitterness, and excessive Saltiness of it; so that neither Fish or any other Creature can live upon it. The *Arabs* use this *Bitumen* of *Judæa* to pitch their Ships as we do common Pitch, and there was a great deal of it employed in the Embalming of the Antients.

Chuse such as is clean, of a fine shining Black, solid, and harder than Pitch, having no Smell but when it is held to the Fire; take Care it be not mixed with Pitch, which may be known by the Smell: They use this to make your fine shining Blacks of *China*. It yields a good deal of Sulphur, partly exalted with volatile Salt and a little Earth; it fortifies, and resists Putrefaction, resolves, attenuates, and cleanses cicatrized Wounds, and is used externally and internally.

It is supposed that the Word *Bitumen* comes from the Greek Word *πίκρος*, which signifies a *Pine*, and which has been changed by Corruption, the π being altered into a β , from whence they pronounced it *Bitumen*, instead of *Pitumen*: This Etymology is taken from the Opinions of the Antients, that the *Bitumen* of *Judæa* was a Pitch that flowed from Pines, and several other Trees about the Lake of *Sodom*: So were the *Jews* of that Opinion before: The Prophet *Esdra*s, speaking of *Sodom* and *Gomorrhah*, says, that the Earth is founded upon Pitch and Heaps of Ashes.

[*Jews Pitch* is the *Bitumen Judaicum*, *Worm.* 31. *Charlt. Foss.* 14. *Bitumen nigrum crassum*, *Kentm.* 21. *Bitumen Judaicum asphaltum*, *Mont. Ex.* 12. It is a *Bitumen* formed in the Bowels of the Earth: It is found in many Places; but the best is that swimming on the *Dead Sea*: And there is no question of its being thrown up into it by the Earth, since all the Hills there about are full of it, and Pieces of two Feet length are dug up black as Jet, and hard enough to bear polishing like Marble. *Herman* also found of it on an Island near the *Cape of Good Hope*.

Dioscorides directs us to make Choice of that which shines like Purple, and to reject what is black, as foul, and of no value. How far his Directions agree with what we now receive of it, is

not easy to say, for it is always quite black, but when broken, and held to the Light, is of a reddish or Saffron Colour. It is at present very seldom seen in the Shops, and we are obliged to use the *Pissasphaltum* in its Place; but not the artificial *Pissasphaltum*, which is made of common Pitch, &c. but a genuine, mineral, bituminous Substance, named by our Author in the Chapter of *Naphtha* hereafter, called *Fossil Pitch*, the *Pissasphaltos Nativum*, *Schred.* 4. 208. *Pissasphaltum*, *Worm. Mus.* 30. *Charlt. Foss.* 141. This is found in the *Campania* of *Rome*, oozing through the Crannies of the Rocks like Tar; as also in *Auvergne* in *France*, and about *Epidaurus* in *Morcia*, where it is washed from the Mountains by the Rivers, and formed into black hard Glebes. Its Virtues are the same with those of the former, and it is what is almost constantly sold in its Place.]

4. Of Pit Coal.

EARTH, or *Pit Coal*, is a sort of stony *Pomet. Bitumen*; it is chiefly used by Farriers and other sorts of Smiths to heat their Iron. That of *England* is esteemed the best, though there are some that say ours of *Auvergne* comes very little behind it; it is made a great Traffick, being a Commodity much used in *France*; the best is pretended to be that which is most void of Sulphur, and consequently that which will keep longest in the Fire. Some will have it that this Stone Coal is the Result of *Petroleum* made in the Bowels of the Earth, which is probable enough, since out of it may be drawn an Oil altogether like the Oil of *Petre*.

It is called in *Greek*, *Lithanthrax*; in *Latin*, *Carbo Petræ*, or *Carbo Fossilis*; *Lemery.* and in *English*, *Coal*; and is distinguished into *Sea Coal*, and *Pit Coal*, only upon the Account of that which is generally carried by Sea; all Coal being, properly speaking, *Pit Coal*; it is chiefly found in *England*, *Scotland*, *Ireland*, *Germany*, &c. and is an impure Sulphur, mixed with many gross and earthy Parts, and a volatile Salt, being strong, friable, and black: In Distillation it yields an acid Spirit, reddish Oil, black Balsam, and volatile Salt, like Amber; as is but too well known to the Chymists of this Age, who adulterate with it most of the Preparations of their Shops, that are either chargeable or troublesome and tedious in the Operation. The Virtues of this are in a lower Degree like those of Amber, as well internally as externally applied.

[*Coal* is the *Lithanthrax*, *Merf. Pin. Carbo Fossilis sive Lithanthrax*, *Worm.* 31. It is drying and detergent, and is much oftener used in Medicine

dicine than the Physician imagines. *Lemery* has justly observed the villainous Tricks played within in Adulterations by the Chymists; and those of our Nation are not at all inferior to the *French* in Inventions of that kind.]

5. Of Terra Ampelites, or Kennel Coal.

Pomet. **T**ERRA Ampelites, or Kennel Coal, is a dry Bitumen, impregnated with Sulphur, that easily splits into Scales, and is reduced to Powder; it is found in the Entrails of the Earth in many Places of *France*. We have two sorts of it, the one soft, the other hard, which comes from near *Alençon*, in the Province of *Maine*; the Property of the Quarry whence it is taken belongs to a Curate of a Parish, who makes Seven or Eight hundred Livres per Annum of it. The Quarry is forty or fifty Feet deep; and though this is a Merchandize of low Price, yet they make a good Trade of it; there hardly being any Artificers in Stone or Wood, but what make use of it more or less. That which is good must be lately taken from the Mine, for when it is stale and old, it resolves into a Powder, and becomes a Saltpetre; it ought to be light, neither too soft nor too hard. Some have given it the Name of *Vine Earth*, because it kills or drives away the Worms from the Vines. Also it is called *Pharmacitis*, because it is used in Medicines.

Ampelitis, sive Pharmacitis, the Black *Lemery*. Stone, or medicinal Earth, is a very bituminous Stone, black as Jet, splitting into Scales, and is easily reduced to Powder. They get it from a Quarry near *Alençon* in *France*. There are two sorts of it, one soft and the other hard; it affords Abundance of Sulphur and Salt; it is proper to kill Worms, applied to the Belly, and to dye the Hair black. Some use it to destroy Vermin at the Vine Roots.

[*Cannal* or *Kennel Coal*, is the *Lapis Ampelitis Galeni*, *Charlt. Foss.* 14. *Succinum Nigrum*, *Schwenk, Cut. Foss.* 394. *Terra Ampelitis, Worm.* 31. *Terra Ampelitis sive Pharmacitis, qua medicatuntur*, *Kentm.* 3. It is a Detergent, and good in malignant Ulcers, but not much used in Medicine; near the Places where it is dug in *England*, they turn it into Toys, &c. which are beautiful, and bear a very fine Polish.]

6. Of Sulphur Vivum, or Native Sulphur.

Pomet. **S**ULPHUR Vive is a bituminous Earth or Clay easily inflammable, that in burning emits a sulphureous Smell; it is brought us from *Sicily*, *Italy*, and other Places. As to the

Choice of Live Sulphur, so called because it is fold and made use of just as it comes out of the Earth, let it be tender or soft, friable, easy to be broken, smooth, shining without as well as within, and of a sort of Mouse Dun, or Grey, as free from Gravel and Dust as possible.

This sort of Sulphur is in Use for some particular Operations, and certain Galenical Compositions, and pretty much used by Vintners, who mix it with Sugar, *Anis*, Cinnamon, Nutmeg, Cloves, &c. to sweeten and preserve their Vessels.

Apothecaries also use it to correct *Scammony* by the Fume of it.

7. Of Mineral Sulphur.

SULPHUR Mineral is a hard earthy Bitumen, of a yellow Colour, and bright enough, of a foetid sulphureous Smell, easy to be melted or burnt; and is more or less beautiful, as it is more or less mixt with Impurities it meets with in the Mine.

This Mineral Sulphur comes from Mount *Vesuvius*; as to the Choice of it, though indeed it is made but very little Use of, let it be in handsome Lumps, of a golden Yellow, bright and shining, and as little as may be mixed with Earth or other Filth.

Its Uses and Qualities are no other than like those of the common factitious Brimstone that is made of this, which we are going to speak of under the next Head.

Of Sulphur in Rolls, or Common Brimstone.

The common factitious Sulphur or *Pomet*. Brimstone, is made of yellow Mineral Sulphur melted, and by the Assistance of right Train Oil and Moulds, cast into the Form in which we see it.

This Sulphur is more or less beautiful, and endowed with good Qualities, according the Degree of its Purification, and the Places where it is made; for that of *Holland* is much better, and more beautiful than that of *Venice*, or that of *Marseilles*, the three Places whence it comes, and where it is made: The Gentlemen of the *Royal Arsenal*, indeed, manufacture great Quantities, but they make use of it all themselves.

In your Choice of this factitious Sulphur, or Brimstone, take such as comes from *Holland*, in large thick Rolls, of a golden Yellow, light, easy to break, and being held close, or grasped in the Hand, and applied to the Ear, crackles and makes a Noise, and at length breaks to Pieces, and being broken, appears as it were in Crystals, which are the

the true Marks of that of *Holland* and *Venice*; none of which are to be found in the *Marfeilles* Sulphur, it being little better than a grey sort of Earth of late; however, since we could have none from *Holland*, they have learnt the Art of well-working it there; and I think it has been our own Fault that we have suffered other Nations so long to run away with the Profit of refining it as it ought to be. The Reason has been, that no Merchants have undertaken to write of it, or enquire into the Manner of doing it; only a few Physicians, and some Apothecaries and others that have travelled, but understood nothing of the Mystery of Trade, have set Pen to Paper concerning it, who acquit themselves but indifferently, when they tell us that ordinary Sulphur in Rolls, or common Brimstone, is made of *Sulphur Vive*; for that would be to turn Pewter into Lead, since the latter, though natural, is more valuable, that is, will sell dearer than the former, notwithstanding it be wrought; however, I would not be thought to discourage Authors, few Books being so ill written, but may contribute, in some Measure, to the Advancement of Knowledge; only in general it may be said, that the Subject one is going to treat of, ought to be understood before we begin to write.

There are several other artificial Sulphurs, as I have already taken Notice, proceeding only from the different Preparations of different Countries; as the ordinary Sulphur of *Marfeilles* is in small Rolls, and the green Sulphur of the same Place, both in large and small Rolls, which sort is esteemed the best for Distillation, as shall be shewn hereafter.

There are a great many other natural Sulphurs, besides the two sorts we ordinarily make use of, but they are not very common with us, because they come from a great Way off, and we have them not in large Quantities.

The first and most desirable is that of *Quitto*, of a golden Colour, and an Amber Figure, found in great Abundance near the Gold Mines.

A second sort is that of *Nicaragua*, which is in a yellowish grey Mass, altogether like that which was found, some Years since, in that Bank of Earth which was levelled by *St. Martin's Gate* in *Paris*.

A third sort is of *Switzerland*, resembling that of *Quitto*; and many more there are which I shall forbear to mention, there being no Demand for them.

The Use of Sulphur in Rolls, or common Brimstone, is well known to all, and that it is one of the chief Ingredients of Gunpowder; for which Reason, those that sell great Quantities of it to

the *Arsenal*, for that Purpose, ought to discover it when it is faulty, that what is made of it may not fall short of Expectation. This Sulphur is used too in whitening Gauzes, Stockings, &c. for nothing blanches any Thing of Woollen like the Fume or Vapours of Sulphur.

It is also of considerable Use in Medicine, as well in many Prescripts, as to perform a great many Operations in Chymistry, as will be seen hereafter.

It is besides a Specifick in the Itch; but Care ought to be used, for it now and then produces very ill Symptoms.

Sulphur or *Brimstone*, is brought to us from the *Caribbee* Islands of the *West-Indies*, and is found also in *Italy*, *Bohemia*, *Sicilia*, and *Melos*, being generated of the Fat and Resin of the Earth, filled with an acid and vitriolick Spirit. It is twofold, *viz.* Natural and Artificial. The Roll Sulphur is the latter; but if you would make right Oil of Sulphur, you must chuse the *Natural*, or *Sulphur Vivum*; but if that cannot be got, you must make use of the other, which yet you are to try, whether it easily inflames and burns constantly; if not, it is not good, but is impure and adulterated with Resin, and such like Matters, whereby it becomes harder to kindle, and is easily extinguished, being *Cabaline Sulphur*.

It is a noble Mineral even before Preparation, and is generally appropriated to the Breast and Lungs, and to cure all Diseases which disturb the same; it kills Worms, opens, cuts, resists Putrefaction and Poison, provokes Sweat, and is given in Coughs, Colds, Phthificks, Wheesings, Shortness of Breath, &c. Outwardly applied it resolves all hard Tumours, cures corroding Tetters, Scabs, Itch, Scurf, Morpew, &c. dries up old Sores and Ulcers. Though this being finely ground, is sometimes used internally, yet the Flowers are more commonly used, as being a Sulphur opened and purified from all Filth, whereby it is fitter for all internal as well as external Uses.

Of Flowers of Sulphur.

Flowers of Sulphur are prepared of *Sulphur* burned in Pots made for the Purpose, and so reduced into *Flowers* as we see. The best and most beautiful *Flower* of Sulphur comes from *Holland*; but of late, since it has been made at *Marfeilles*, *Roan*, and *Paris*, we have little thence. The true *Holland's Flowers* of Sulphur were wont to be brought us in Cakes that were light, soft, friable, and rather white than yellow; but through Avarice and the present Wars, there

there is no such now; and the best that we have at present is from *Marfeilles*, which, though very good, does not come near that I have mentioned of *Holland*; it ought to be in an extraordinary fine impalpable Powder, of a bright Yellow, and of an agreeable Taste.

The third sort is that of *Roan*. This usually is of a whitish Yellow, made up of Sulphur raised by a violent Fire, and Meal or Wheat Flower, or fine powdered Starch, added to it, which is all a Cheat. In like Manner is that which is generally hawked about, made of the Powder of *Holland* Sulphur beaten, and passed through a very fine Taffety or Silk Searce; but the Cheat is easily discovered by the low Price this spurious Stuff is sold at.

Upon the whole, *Holland's* Flowers of Sulphur are preferable to any other; next to them those of *Marfeilles*; and these are the only two that ought to be given internally.

The true Flowers of Sulphur are natural Balsam for the Lungs, and endowed with so many good Qualities, that it would be endless to recount them all.

Flower of Sulphur is also made after another Manner, to wit, by adding to it fixed Salt-petre, or *Sal Polychrestum*, which is the Method we use to make it white; but there being little Demand for this sort, it is seldom made, though it be a very good Medicine, and more agreeable to take than the abovementioned.

To make Flowers of Sulphur, take *Lemery*. Sulphur grossly powdered, half a Pound; put it into a Glass Body, or Cucurbit; place it in a small open Fire, and cover it with another Glass Body, or earthen Cucurbit; turn the bottom upwards, so as that the Neck of the lower may enter into the Neck of the upper; change the upper Cucurbit every half Hour, fitting another in its Place; adding likewise, new or fresh Sulphur; the elevated Flowers sweep together with a Hare's Foot, and continue to do thus so long till you have what you desire. These Flowers are good against Diseases of the Lungs; Dose ten or twelve Grains in any fit Syrup, Pulp, or Electuary; outwardly you may mix them with Hog's Lard, for Scurf, Tetters, and the Itch; but be cautious of using it to Infants, especially anoint not any where upon the Trunk of the Body, and especially the Belly. If your Sulphur be sublimed with *Sal Polychrest*, you will have white Flowers.

Of Salt of Sulphur.

Pomet. The Salt of Sulphur is made several Ways, but the best and easiest is according to Monsieur *Charas's Pharmacopœia*, p. 887.

whither the Reader may have Recourse. This Salt is composed of Salt-petre refined, and Spirit of Sulphur, reduced by means of a Retort with a Sand Heat, into a white Mass, which has in any good Qualities; or it may be made with the *Sal Polychrest*, or otherwise, as may be seen in Abundance of chymical Books which treat of it.

Salt of Sulphur is much in Use to temper and allay the Heat of Fevers; the Dose is not adjusted, but it is sufficient to give it in any common Drink to an agreeable Acidity.

What Form one pleases may be given to this Salt; some have it in a Mass, others in Crystals; some granulated, and others in Powder, or, finally, in Rolls; which last is a curious Method, and known but by few.

Of Magistery, or Milk of Sulphur.

The *Magistery*, or *Milk*, as it is called, *Pomet*. of Sulphur, is made of the Flowers of Sulphur, and Salt of Tartar boiled in Water; adding distilled Vinegar to precipitate a Powder, which when dried will be white, and is esteemed very good for the Lungs, and for Asthmatick Persons.

If half a Pound of Flowers of Sulphur *Lemery*. be mixed with a Pound and an half of Salt of Tartar, or Pot-ashes, and be boiled in two Gallons of Water for six or seven Hours, the Sulphur will be all dissolved, and the Liquor become red: This filtered and mixed by little and little with Spirit of Vinegar, or some other Acid, presently becomes white like Milk. Let it stand to settle, and a white Powder will precipitate, which beingedulcorated by five or six Times washing in hot Water, and dried, is the *Lac Sulphuris*, which is better than the Flowers for all the Diseases aforementioned, given from six Grains to fifteen. This is powerful against all Manner of Catarrhs and Fluxes of Rheum from the Head that fall upon the Throats and Lungs; for it consumes and dries up all serous and watry Superfluities.

Of Spirit of Sulphur.

Spirit of Sulphur is a Liquor drawn *Pomet*. from the green Sulphur, by the Assistance of Fire and certain Vessels, as Messieurs *Charas*, *Lemery*, &c. teach us; and as it is of different Colours, according as it is more or less divested of its Phlegm, so it has two different Names assigned it: That which is just as it comes out of the Vessels is called Spirit of Sulphur, which when good ought to be as clear as Rock Water, and of an agreeable Acidity, and which put upon blue Paper, will

will turn it red; but the best and surest Proof is to deal with honest Men for it.

The second sort, to which improperly the Appellation of Oil of Sulphur has been given, is the former separated from its Phlegm or superfluous Humidity, and which has a bright Yellow, or golden Colour, and is so very strong that it cannot be endured upon the Tongue.

Some Hawkers counterfeit Spirit of Sulphur by a Mixture of Vinegar and Spirit, or rather Phlegm of Vitriol, or with Water, adding a few Drops of *Aqua fortis*, and sell it to abundance of People, especially to Vintners, who use a great Quantity of it upon some Occasions.

Great Virtues are attributed to the Spirit and Oil of Sulphur in Fevers and pulmonary Cases especially.

Not long since it has been discovered, that Spirit, or rather the Oil of Sulphur, is the only Thing to give Lustre to the *Peridot*, as will be seen where we treat of precious Stones; and also to fix the Colour of the Everlasting Flowers, as we call them.

Of Balsam of Sulphur.

Balsam of Sulphur is made two Ways; *First*, with the green or expressed Oil of Anniseed, and the best Flowers of Sulphur, melted or dissolved together; which is called *Balsam of Sulphur* annisated, and has great Qualities ascribed to it, as will be seen hereafter.

Monsieur Charas says, in his Book, p. 470. that some are of opinion this Balsam is in Quality but little behind the *Natural Balsam*, or *Balm of Gilead*, because it heats and dries moderately, and resists Corruption or Putrefaction; it therefore is a celebrated Medicine in pectoral Cases, being very beneficial in Coughs, Asthmas, Pleurifies, and Ulcers of the Lungs. It is good also against Weaknesses and Indigestions of the Stomach, restores the Appetite, expels Wind, eases all sorts of Cholicks. It is said to be good also against the Plague, and all epidemical Diseases, venereal Effects, continual or intermitting Fevers, and the Epilepsy. It may be taken internally, and from three to ten or twelve Drops; and the Stomach or Navel may be anointed therewith in any Illness of the former Kinds, or in Cholicks, &c.

The distilled or chymical Oil of Anniseed might be made use of for this Composition, were it not that in the Operation it is apt to evaporate and fly off, do what you can, more than the green or expressed Oil.

The second Way or Method of making it, is with Oil of Walnuts cold drawn, and Flowers of Sulphur, mixed together, which, by the Assistance

of the Fire, is made into a Balsam very good to digest, discuss, or resolve any crude Fluxion impacted in any Part of the Body, made use of by way of Unction: It is also the Basis of *Emp. Sulphuris*.

Some use Oil of Sweet Almonds, white Poppy Seed, or Turpentine, instead of Oil of Walnuts, in the Composition of this Balsam, in which every one may do as seems best to him.

Some again add to this Balsam, Myrrh, Aloes, Saffron, and the like.

Besides the Sulphurs afore-mentioned, we have a sort of Earth or yellow Stone, which Mount *Æt-na* sends forth, called by us *Naples Yellow*, which Painters make use of; but this sort of Earth is scarce amongst us: The Marks of its Goodness are, that it be sandy, and of as high a Colour as may be. This Earth is nothing but a Sulphur hardened by the Fire in the Bowels of the Earth, which makes it dry and brittle.

You may make a Balsam of Sulphur in a small time, by taking to one Part *Lemery*. of Flowers of Sulphur four or five times as much good Oil of Turpentine, Oil Olive, or the like, and boiling them in a Pipkin, so big, as it may be but half full, till the Flowers are perfectly dissolved into a blood-red Balsam; let the Fire be pretty quick, yet not too quick, and continually stir it all the while it is making, till it is cold, otherwise the Flowers will be apt to coagulate into a Mass, and so you will have no Balsam. It is good against Coughs, Colds, Asthmas, Consumptions, &c. outwardly applied, and is taken inwardly from four Drops to twenty.

[Sulphur is of various Kinds; the general Distinction is into Native and Fictitious, of both which Kinds there are a great Number of Species, differing in Colour, Texture, and, in the latter sort, Manner of Preparation.

The different sorts usually kept in the Shops are four, the *Sulphur Vive*, the *Pure Sulphur*, the *Ca-balline Sulphur*, and the common Roll Brimstone.

The *native Sulphur*, or *Sulphur vive*, is the *Sulphur nativum*, Schrod 501. *Sulphur nativum seu vivum*, Charlt. Foss. 12. *Sulphur fissile seu vivum* & *nativum*, Worm. 26. This is of various Kinds, but what is commonly found in the Shops is either pellucid and yellow, brought from *Peru*, *Switzerland*, &c. or opaque, greenish, yellowish, or greyish and like Clay, dug up near the burning Mountains and sulphureous Springs in many Places. This last, though not so pure or valuable, is the common kind sold in the Shops.

The *pure Sulphur* is the *Sulphur factitium*, Worm. 26. Aldr. Mus. Met. 364. Charlt. Foss. 12. This also is of many Kinds, and prepared in many different Manners: In some Places it is obtained

tained by boiling sulphureous Waters, as at *Buda* in *Hungary*; in others, by a kind of Sublimation from the sulphureous Earth, as in *Italy* and many other Places; and in others, it is extracted from a kind of Pyrites by the Help of Fire, as about *Liege*, &c. it is then melted and formed into Cakes, or else thrown into hollow Cylinders of Iron, rubbed over with Oil on the Inside, and so formed into Rolls. This is the true factitious pure Sulphur to be used in Medicine, and is either yellow or greenish; the last is proper for many chymical Preparations, as containing the greatest Quantity of vitriolick Salt.

The *Caballine* or *Horse Sulphur*, is the Sulphur *Caballinum factitium*, *Kent.* 9. Sulphur nigrum *Caballinum*, *Worm.* 28. *Charlt. Foss.* 12. It is the the Fæces of the other Sulphurs, mixed with Steel Dust, or the Squammæ that fly off from Iron in the hammering, and sometimes formed into Cakes without any Mixture at all.

The last sort, or common Roll Brimstone, is usually a Mixture of Sulphur and common-Resin, cast into Moulds. This is what is generally sold by Grocers and the petty Druggists, but ought never to be used in Medicine.]

8. Of Naphtha, or the Slimy Bitumen.

Pomet. **N**aphtha is a Bitumen or Slime, found in many Places of *Europe*: The Name of *Maltha* was given first to a sort of Bitumen found near *Comagere* in *Syria*. *Pliny* tells us, that this Bitumen is so glutinous, that it sticks to whatever it touches, from whence comes its Name of *Maltha*; and accordingly he relates some strange Stories of it, as that at the Siege of *Samozata*, which *Lucullus* undertook, it was of great Advantage to those in the Town; for that as soon as it touched any of the Soldiers at whom they threw it, it set them on fire in such sort as could not be extinguished without throwing Earth upon them, being of the Nature of other Bitumens, which the more you cast Water upon them, the more they blaze. There is another sort of Bitumen found near *Ragusa*, which has the Smell of, and serves for the same Purposes as common Pitch, and therefore has the Name of *Maltha*, or *Natural Pissasphaltum*, or *Earth Pitch*, bestowed upon it: But these two sorts being unknown to us, and we having none of them in *France*, I shall content myself to speak of that of *Auvergne* only.

The Bitumen then of *Auvergne* is a sort of Pitch, of a disagreeable Smell, found between *Clermont*, *Mont-ferrant*, and *Rion*, in a Place called *Pege-wells*, where it is in such abundance, that it makes its way out of the Earth, and causes a great deal of Uneasiness to Passengers, who when

they tread on it can hardly draw up their Feet, it is so sticking, and who, by reason thereof, are often forced to leave their Shoes behind them. It is this famous Drug the Hucksters dry, and then sell to ignorant Apothecaries, and others, instead of the true Bitumen of *Judæa*, though it be easily distinguishable from it by its strong Smell, whereas the true *Judæa Bitumen* is almost without any Smell at all: It is from its foetid Smell, some, as to *Assa Foetida*, have given it the Name of *Stercus Diaboli*, or *Devil's-Dung*. There are also many other sorts of Bitumen, that come from the Bowels of the Earth; but we having no Commerce in them, as having none of them, I shall not trouble myself to speak any thing about them.

[What our Author has described here under the Name of *Naphtha*, are several different Kinds of the *Pissasphaltum*, which I have already mentioned in the Chapter of *Bitumen Judaicum*: The true *Naphtha* is a more fluid Bitumen, and nearer approaching the Nature of *Petroleum*, but not absolutely the same with it, as some have judged; it is the *Naphtha Alba & Nigra*, *Kæmp. Amœn. Ex.* 274. *Napheba*, *Worm.* 30. *Aldrov. Mus. Met.* 388. *Pharmacum Medæ quibusdam*. It is not to be found in the Shops, but stands recorded for its inflammable Qualities.

The *Maltha* of the Antients was a Mixture of this, and an argillaceous Earth, which together made a kind of Cement, used as Mortar in Building; and, according to *Vitruvius*, this was the Mortar used in building the Walls of *Babylon*.]

9. Of Naphtha of Italy.

THE *Naphtha* of *Italy* is an Oil of different Colours, flowing principally from a Rock situate in the Valley of *Montfestin*, in the Dutchy of *Modena*; and this Oil has been known to us but a few Years since, by the means of one *Roque Foura*, a Native and an Inhabitant of the Village called *Prat*, near *Briançon*, in the *Upper Dauphiné*, of whom I bought the different sorts of *Naphtha* that I have by me, and from whom I had the following Account.

The *Italian* or *Montfestin Naphtha*, comes from a Rock which is upon a Mountain, whither it is conveyed by subterranean Veins, and it is gathered in Oil of different Colours, by means of certain Canals and Cauldrons which separate it: The Duke of *Sara* and *Darce*, and the Marquis of *Arpia* in *Modena*, to whom the aforefaid Rock belongs, have caused Trenches, and Copper Canals, or Pipes, to be made, which are purposely placed to receive the Oil as it distils from the Rock, by means of which it falls into the Cauldrons, from whence

whence it is taken for Use. It is observable, that this Oil changes Colour according as it is nearer or farther off from the direct Light of the Sun; so that that which is of the sunny Side is white, and clear as Water, and most esteemed, that next to it clear and red like Wine, the next yellow, afterwards green; and, in short, that which is at the other opposite Side of the Rock, quite off from the Sun, is black.

White *Naphtha*, which we commonly call Oil of *Petre*, or white Rock Oil, because of its Whiteness, Clearness, and Beauty, is immiscible with any Thing in the World besides, being lighter than whatsoever can be put to it, and consequently it will be uppermost; its strong piercing Smell comes near that of Sulphur, which renders it extremely volatile. It is easy to catch Fire, which may serve as a Precaution to those who sell it, to be as careful of it as of Gun-powder.

The great Virtue of this Oil is the Reason why I will not say any Thing of it here, but rather refer my Reader to what the aforementioned *Roque Feura* has printed concerning it. As for the red, yellow, and green *Naphtha*, they are so little in Use, that we do not see any of them at all: And moreover, another Reason for it may be, that the *Italians* mix them with the black Oil before they send it to us; and this makes the Oil of *Petre*, which we have thence, instead of being black and thick, as it comes out of the Rock, to be red, transparent, and yellowish, and moderately sulphureous in its Smell. And as this Oil is pretty dear, some counterfeit it, as will be seen in the next Chapter.

Naphtha, Pissasphaltum Naturale, is *Lemery*. a kind of soft or liquid *Bitumen*, of different Colours, very inflammable, which is brought from several Parts; as the Place where antient *Babylon* stood, and about *Ragusa*; likewise from a certain Lake or Marsh of *Samofata*, and divers other Parts. But we have now no other *Naphtha* brought but what comes from *France* and *Italy*; the last of which is a sort of *Petroleum*, or clear Oil, that is sometimes white, sometimes red, sometimes yellow, sometimes green, and sometimes black. It flows from a Rock situate on a Mountain near *Montfelin*, in the Dutchy of *Modena*. The white is most valued. The *Bitumens* called *Naphtha* are almost all Sulphur or Oil mixed with some acid and volatile Salt. They are incisive, penetrating, deterfive, digestive, vulnerary, and strengthening, and so are prevalent against Palsies, Weakness, and Relaxation of the Nerves. Outwardly applied they relieve the Tooth-ach; and dissolved in a Turpentine, or vinous Clyster, prevail against Dysentery

and *Diarrhæa*. *Petroleum* is by many used instead thereof.

[The *Naphtha* of *Italy* is a kind of *Petroleum*, the *Petroleum flavum, sive Italicum, Ind. Med. 90*. It is particularly plentiful about *Frumetto*, where the Inhabitants dig Wells of thirty or forty Feet Depth, till the oily Spring is found, and there it is always mixed with Water. The Wells dug at the Foot of the Hill, furnish a large Quantity of very red Oil; those near the top a white, but in much smaller Quantities, but which is most esteemed, and is what they particularly call the *Naphtha*: There is also a Rock in the same Country, near the *Apennine* Mountains, where there is a considerable Spring of Water which runs perpetually; on which there swims a yellow Oil of of this kind in very large Quantities, insomuch, that it is usually gathered twice a Week by many Pounds at a Time.]

10. Of the black Oil of *Petre*, or Oil of *Gabian*.

THE *Petroleum*, or black Oil of *Gabian*, *Pomet.* is a liquid *Bitumen*, that comes from the Bowels of the Earth, and by subterranean Channels is thrown upon the Waters of a small River, near a Village called *Gabian*, in the Bishoprick of *Bezier* in *Languedoc*. Formerly this Oil was so plentiful and common, that it was made but little Account of; for considerable Quantities might be gathered of it daily: But now *Mondays* are only set apart for that Purpose; and the Place where it is, is enclosed with a Wall, and guarded by a Man. And I have been told at *Gabian*, that the Bishop makes a great Profit of it, which notwithstanding is not so great as it was heretofore.

This Oil ought to be of a middle Consistence, of a strong stinking Smell, and of Colour black.

In the Choice of it, one must see that it be not Oil of Turpentine, thickened and coloured with black Pitch. The best Way is to buy it of honest reputable Merchants, that would not do an ill Thing, and sell one Thing for another, and not to expect it at an under Price.

The black Oil of *Petre* of *Italy*, or of *Gabian*, is somewhat in Use in Physick, but chiefly employed by Farriers, and those that make artificial Fire-works.

There are moreover other sorts of Oil of *Petre*, or *Bitumens*, found in many Parts of the World, as those of *Cilao*, of *Surinam*, and *Copal*; but since we have none of them, nor any Trade or Dealing in them, I will not pretend to say any Thing concerning them.

Petroleum,

Petroleum, *five Oleum Petreae*, or *Lemery*. *Rock Oil*, is a kind of *Naphtha*, or bituminous Liquor, that flows from the Clefts of several Rocks, Stones, and Quarries, in many Parts of *Italy*, *Sicily*, and *Languedoc*. It is brought of several Colours; as black, red, white, and yellow. The black *Petroleum*, usually brought us from a Village in *Languedoc*, called *Gabian*, and from thence Oil of *Gabian*, is of a very unpleasant Smell. All the Kinds of *Petroleum* are incisive, penetrating, resolute, attenuating, resist Poison, destroy Worms, expel Wind, strengthen the Nerves. Some Drops may be taken inwardly and outwardly, the Joints, Emunctories, and Navel, may be rubbed with it.

It is hot and dry, and of thin Parts, and is of admirable Use against Aches and Pains, and all cold Distempers of the Muscles, Nerves, and Joints. It is prevalent against Gout, Palsies, Cramps, Convulsions, Apoplexy, Megrims, and other cold Diseases of the Head and Brain. Anointed upon the Region of the *Abdomen*, Bladder, Reins, Spleen, or Womb, it gives Ease to all Pains and other Disorders of those Parts; dissolves Swellings, &c. It is said to cure ulcerated Kibes and Chilblains, to help Bruises, and heal old Sores; and is of singular Use against the Rheumatism, or running Gout. Some say that that which comes out of *India* is the best and pleasiest, and is thought to have all the Virtues of the *Naphtha* aforegoing.

[Oil of *Petre* is the *Bitumen Liquidum oleo simile quod innatat lacubus*, *Kentm.* 20. *Petroleum*, *Worm.* 30. *Charlt. Foss.* 14. *Petroleum Rubrum five Gabianum*, *Ind. Med.* 90. It is found in many Countries, particularly in *Italy*, as also in great Plenty in *Britanny*, near *Beriers*, where it flows, mixed with Water, from the Cracks of the Rocks.

It easily takes Fire, and is in many Places burned in Lamps, instead of common Oil. In Medicine it is attenuant and resolvent, good in hysterick Cases, given inwardly from ten to thirty Drops; and in Palsies externally used as a Liniment. We have little of it genuine in *England*; our Chymists having learnt a Way of adulterating it with the Oil of the cheapest of all *Bitumens*, the common Coal.]

11. Of China, or Indian Ink.

Pomet. *CHINA Ink* is a hard solid Paste, which, according to some Authors, the *Chinese* make of a black bituminous Earth, which they powder, and with Gum Tragacanth form into a Paste, which they after make into little Sticks, and having marked them with some *Chinese* Characters, they dry and sell them as we have

them. Others will maintain that it is made of a Black produced from the Smoak of Oil of Olives burnt; but as it is impossible I should be able to determine of which it is composed, I will only remark, in the Choice of it, that the true genuine *Ink of China* is to be preferred to that of *Holland*, and is distinguishable from it, in that it is in small square Cakes of the Thickness and Length of one's Finger, and of a very black jet Colour, whereas the *Holland* kind is in flat Lumps, and of a greyish Black.

China, or *Indian Ink*, serves for Maps. In short, it is very useful for all such as mark or take Sketches in Black, being a portable Ink.

[*Indian Ink* is a nice Mixture of a peculiar sort of Lamp Black, made by the burning fat Pork, and mixing its Soot into a Paste with the Solution of Gums.]

12. Of Gun-powder.

GUN-powder is a Composition of Salt-*Pomet.* *petre*, Sulphur, and Coal made with Willow, or any other light Wood, which by means of Vinegar, and a Sieve, or any other Instrument full of Holes, is made into Corns big or little, or what Size you please: But I will not enlarge upon this, the Manner of making it being very well known; and by the bye, I would not advise any Merchant to deal in this Commodity, whose professed Business it is not, it being too hazardous.

Sal Pyrium, *Sal Bombardicum*, and *Pulvis Pyrius*, and *Bombardicus*, or *Gun-powder*, was a thing wholly unknown to the antient *Greeks* and *Arabians*, and therefore they have no Name for it. It is made in many Parts of the World, but most plentifully in *France* and *England*, and is composed of Salt-petre, Sulphur, and Wood-coal.

You are to chuse good and pure Nitre, with fair and large Crystals or Shootings: If it be not good, you must purify it as we have before taught. This purified Nitre put into a Kettle, which set upon a Furnace with a moderate Fire, which gradually encrease to such a Degree of Heat, till it begins to smok and evaporate, lose its Humidity, and grow very white; keep continually stirring it with a Wooden or Iron Ladle, whereby its Greasiness will be taken away; then pour so much Water into the Kettle as will cover the Nitre; and when it is dissolved, and is brought to the Consistence of thick Liquor, then with a wooden Stick or Ladle, keep continually stirring it without any Intermission, till all its Humidity is again evaporated, and it be reduced to a moist dry white Meal.

You ought also to chuse the purest and best Sulphur; that which is in very great large Lumps, clear,

clear, perfectly yellow, not very hard nor compact, but porous, nor too much shining, is the best. If when it is set on Fire, it freely burns all away, leaving little or no residant Matter, it is a Sign it is good. So also if you press it between two Iron Plates that are hot enough to make it run, if in running it appears yellow, and that which remains be of a reddish Colour, you may conclude it excellent, and fit for your Purpose; but if it be impure and foul, Powder-makers prepare it after this Manner. Melt your Sulphur in a large Iron Ladle or Pot, over a very gentle Fire of Coals well kindled, but not flaming, then scum off all that which riseth on the Top, and swims upon the Sulphur; presently after take it from the Fire, and strain it through a double Linen Cloth, letting it pass at leisure: so will the strained Sulphur be pure, which powder finely.

You ought also to chuse Charcoal large, clear, free from Knots, well burnt, and cleaving; but if you be where it is not to be had, you must make it after this Manner: Cut down your Wood when it is full of Sap, and is apt to peel, *viz.* in *May* or *June*, and chiefly Hazel, or Ash, or Juniper, &c. which cut into Lengths of two or three Feet long, of the Bigness of ordinary Billets, taking away the Rind and superfluous Branches. Being very dry, make them into Bundles, and in a plain even Place, fit for that Purpose, set them upright one by another, and one upon another, cover them with Earth or Turf very close, leaving only some few Vent-holes; then kindle the Fire, and when it is well lighted, and all in a red burning Heat, being reduced into burning Coals, stop up every Vent-hole for the Fire, close with moistened Earth, so that there be not the least Breathing-place. The Fire being thus extinguished, the Coals will be pure and whole, without any Ashes, and in twenty-four Hours after, you may take them out for Use. But for a present and small Occasion do thus: Cut the Wood into small Pieces, dry them well, put them into a large earthen Pot, cover it all over the Top well with Clay, then make a good Fire round the Pot, gentle at first, but so as it may be made red-hot; covering it also all over with Fire, leaving it so for the Space of an Hour or more in that strongest Heat; let the Pot cool of itself, and then take out the Coals for Use, which reduce into a fine Powder.

Of these Ingredients the Country People in the *Ukraine* in *Poland*, and the *Cossacks*, make it with their own Hands, thus: They put their Proportions of *Nitre*, *Sulphur*, and *Charcoal* (being all in fine Powder) all together in an earthen Pot, upon which they put fair Water, then they boil it upon the Fire till all is evaporated, and the Matter be-

comes thick like Paste, and taking it from the Fire they make it yet drier in the Sun, or in a Stove, or the like, till it is fit to corn; then they granulate it by passing it through a Hair Sieve, making the Grains of what Bigness they please; and this serves their rural Occasions, as well as if it had been made by the most skilful Artist in the World.

But in order to the truly knowing and making of Gun-powder, it is fit that you should first know the Kinds thereof, and then the different Strength of each. The Kinds are threefold; I. Cannon Powder; II. Musquet Powder; III. Pistol Powder; and of each of these there are two several Kinds, *viz.* a *stronger* and a *weaker*, all which Differences arise only from the various and differing Proportions of the above enumerated three Ingredients. The exact Limitations of which we come now immediately to declare.

	Cannon.	Musquet.	Pistol.	
<i>Nitre</i>	10.0	10.0	10.0	<i>Strong.</i>
<i>Sulphur</i>	2.5	1.8	1.2	
<i>Coal</i>	2.5	2.0	1.5	
<i>Nitre</i>	10.0	10.0	10.0	<i>Weak.</i>
<i>Sulphur</i>	2.0	1.5	1.0	
<i>Coal</i>	2.4	1.8	1.8	

The Preparations declared, I. Cannon Powder, 1. *The Stronger.* To every 100 lb. of Salt-petre there is Sulphur 25 lb. Charcoal 25 lb. 2. *The Weaker.* To every 100 lb. of Salt-petre, Sulphur 20 lb. Charcoal 24 lb. II. Musquet Powder. 1. *Stronger.* To Salt-petre 100 lb. Sulphur 18 lb. Charcoal 20 lb. 2. *The Weaker.* To Salt-petre 100 lb. Sulphur 15 lb. Charcoal 18 lb. III. Pistol Powder. 1. *The Stronger.* To Salt-petre 100 lb. Sulphur 12 lb. Charcoal 15 lb. 2. *The Weaker.* To Salt-petre 100 lb. Sulphur 10 lb. Charcoal 18 lb. as in the Table annexed, which are the Numbers, and in the same Proportion, but in lesser Quantities or Decimals.

The Way of making it. All these Ingredients are to be finely powdered, and they are to be moistened with fair Water or Vinegar, or Spirit of Wine, or Water and Spirit of Wine mixt together, or Urine, which is most usual; then let all be well beaten together for the Space of twenty-four Hours at least, and then granulated after the following Manner:

You must prepare a Sieve with a bottom of thick Parchment made full of round Holes, and the

the former beaten Mass must beforehand be moistened with the following Liqueur. *R Spirit of Wine* ℥xx. *Spirit of Wine Vinegar*, ℥xij. *Spirit of Nitre*, ℥iiij. *Spirit of Sal Armoniack*, ℥ij. *Camphire*, ℥j. dissolved in *Spirit of Wine*, mix together for the Purpose aforesaid. Or instead thereof, if all these Things cannot be had, with this, *R Brandy*, xl. *Camphire* ℥j. mix and dissolve; the Mass being made up into Balls as large as Eggs, put them into the Sieve, and with them a wooden Ball, so moved up and down about the Sieve that it may break the Balls of Powder: make all pass through the little Holes into Corns.

But in making of vast Quantities, to do it all by the Hand, would be a most tedious and slavish Work, and therefore Kings and the supreme Rulers of Countries have provided Mills for that Purpose, by Help of which they can do more in one Day than a Man can in an hundred.

You may make Powder of various Colours, if you so please, but then you must leave out the Charcoal, and put in as much for it of another Thing of the Colour you intend, which may be as apt to kindle or take Fire as Charcoal is; but for real Service, whether for War or Hunting, &c. the black Powder is much to be preferred; yet for Satisfaction Sake, we will give you the Directions for making *White Powder*.

White Powder. Take Salt-petre, 10lb. *Sulphur*, lbj. *Saw-dust of Elder, or the like Wood, dried and powdered fine*, lbij. mix and make Powder by the former Directions. Or thus: *R Nitre* 10lb. *Sulphurs* lbjss. *dried and finely powdered, Saw-dust* lbij. mix and make Powder. Or thus: *R Nitre* 10lb. *Sulphur*, lbij. *Rotten Wood dried and powdered* lbij. *Salt of Tartar*, ℥iiij. mix and make Powder, to be kept close from the Air.

This is also to be noted, that in making *Pistol Powder*, if you would have it stronger or more violent, you ought to stir it up several Times while it is in the Mortar, and moisten it with Water distilled from Orange or Lemon-peels in an Alembick, and then beat it for twenty-four Hours, as aforesaid.

Moreover, you ought to know, that Powder, when it is corned, is of much greater Force and Power than when in Dust or Meal; and from

hence it is concluded, that the larger Grains are stronger than the smaller, and for that Reason Cannon Powder is granulated larger than Musket, and Musket than Pistol; and therefore being put into Ordnance, Muskets, or Pistols, it ought not to be forced or beaten so home or hard into the Piece, as to bruise the Grains, lest it thereby lose much of its Strength.

To know the Goodness of Gun-powder. It is tried three Ways, by Sight, by Touch, and by Fire. *First by Sight*; If it be too black, it is too moist, or has too much Charcoal in it; so also if rubbed upon white Paper, it blacks it more than good Powder does. If it be of a kind of Azure Colour, or a little obscure, something bordering upon red, it is a Sign of good Powder.

Secondly by Touching; If in crushing of it with your Fingers Ends the Grains easily break and turn to Dust, without feeling hard, it has too much Coal in it. If in pressing under your Fingers upon a smooth hard Board, some Grains feel harder than the rest, or as it were dent your Finger's End, or very hardly yield to pressing, the Sulphur is not well mixed with the Nitre, and the Powder naught.

Thirdly by Burning; Lay little Heaps of Powder, three Inches or more asunder upon white Paper, and fire one of them; if it only fires and burns all away, and that suddenly, almost imperceptibly, without firing the others, and makes a small thundering Noise, and a white clear Smoak rising in the Air, almost like a Circle, the Powder is very good: But if it leaves black Marks behind it, it has too much Coal in it, or is not well burnt. If it leaves a Greasiness behind it, the Sulphur or Nitre are not well cleansed or ordered as they should be. And if two or three Corns of Powder be laid upon a Paper an Inch asunder one from another, and you put Fire to one of them, and they all fire at once, leaving no Sign behind but a white smoaky Colour in the Place, and the Paper not touched, the Powder is good; so also if fired in your Hand, and it burns it not; but if black Knots, which burn downwards in the Place where Proof was made, remain after firing, it is not strong enough, but wants Nitre.

BOOK V.

OF STONES.

P R E F A C E.

I mean by the Word Stone, a solid and hard Body that will not melt in the Fire, or be extended under the Hammer, formed in the Earth by Course of Time, being a kind of Mineral. I shall divide Stones, the Subject of this Book, into two Classes; to wit, into Precious and Common Stones. By precious Stones I understand those that are dear, either because they are scarce, or that they come from far distant Parts, and such as are very hard, small, and sparkling. And by the Common, I mean such as are of little Value: I shall begin with the Hyacinth, or Jacinth, as being the finest of all those we deal in, and of which we make the most Use. And by the way, the Reader may be pleased to take Notice, That I shall only speak of such as we deal in, not meddling with the fine Stones the Jewellers and Lapidaries trade in.

1. Of the Hyacinth, or Jacinth.

Pomet. **T**HE Hyacinth that is used in Medicine, is a Stone of which there are three Kinds, to wit, the *soft milky Hyacinth*, which is a little Stone of the Size and Figure of a moderate Grain of Salt, very tender, and of the Colour of Milk, from whence it derives its Name. The Second is a reddish Stone without and within, cut naturally like a Diamond Point, found very frequently in *Poland, Bohemia, Silesia, and Italy*: Some of this kind is often met with white mixed with yellow, red, or other Colours; but these different Sorts are not used by any, but such Apothecaries and Hucksters, as only consider the Cheapness, or do not know them from others; they ought to be entirely rejected, being nothing but a sort of Sand; as also another sort of false *Hyacinths*, that are little Stones about the Bigness of a Pin's Head, of a shining red, that are very common in several Parts of *France*, but chiefly in *Auvergne*, which are what we call *Jargons*, or false *Hyacinths*: Wherefore those that would have the *Jacynth* for the Confection that bears its Name, and is after described, must use no other than the *milky Hyacinth*, as being the true Oriental, and fit for medicinal Use: it requires no other Preparation than to be ground to an impalpable Powder.

Of the Confection of Hyacinth.

The Confection of *Hyacinth* is a liquid and cordial Electuary made of *Hyacinth*, red Coral, Bole from the *Levant*, sealed Earth, of each four Ounces and a half; Grains of *Kermes*, Dittany of *Crete*, Tormentil Root, Citron Seed, Saffron, Myrrh, Provins Roses, Sanders, the Bone of a Stag's Heart, Shavings of Harts-horn and Ivory, Sorrel, and Purslain Seed, of each ten Drachms and two Scruples; of Sapphire, Emerald, Topaz, fine Pearl, raw Silk, Gold and Silver Leaf, of each five Drachms and a Scruple; Musk and Ambergrise, of each two Scruples; powder all the Drugs, and grind the Stones on a Porphyry, then make them into an Electuary with Syrup of Lemons. Those who desire to know further of it, let them consult *Monseigners Charas* or *Bauderon's Dispensatories*. The Confection of *Hyacinth* ought to be of a good Consistence, fresh and faithfully prepared, of a reddish Colour upon the Yellow: Those that prepare this Medicine ought not to put in Musk and Ambergrise, except by the Direction of the Physician; because the greatest Part is used by the Women, and those Perfumes are very improper for that Sex, especially in any hysterical Case. This Confection is much prescribed, because of its good Qualities in fortifying the Heart, resisting of Poison, &c. and it is of the same

same Nature with Confection of *Alkermes*, being much used in the *Lionnois*, *Provence*, and *Languedoc*, where you meet with few People without a Pot of this Confection, or of *Alkermes*, or *Treacle*, about them, of which they take a small Quantity every Morning. The Dearness of this Medicine, and the Demand for it, is the Reason that you have a thousand Sophistators of it, who do it so grossly and scandalously, that they afford you no better than Honey, Bole, Myrrh, and some Leaf Copper for this Confection, and sometimes a little Bastard Saffron; therefore the best Way is never to meddle with this except you have it from an honest and reputable Dealer.

Hyacinthus, sive *Lapis Hyacinthinus*, *Lemery*. the *Jacinth*, is a precious Stone, of which there are a great many sorts that differ in Size and Colour; for some are as small as a Grain of Salt, of a white Colour, and this Kind is called the *soft milky Hyacinth*, which is the oriental; others are as big as Peas, very hard, of a red Colour, inclining to the yellow, bright, and resplendent. The Oriental are to be preferred to those of *Silesia* and *Bohemia*, they are known by their Bigness, their Beauty, and their Hardness; the Oriental exceed not the Size of a Pea, and are finer and more brilliant than the *European* kind. There are others much about the same Size, of a yellowish Colour, almost like Amber; some are white, partaking of red or yellow, and several other Colours; others are as small as Pins Heads, of a bright Red: This last kind is found in several Parts of *France*, and particularly in *Auvergne*; all the sorts are very cordial and restorative; Dose half a Scruple.

[The *Hyacinth*, or *Jacinth Stone*, is the *Hyacinthus*, *Charlt. Foss.* 38. *Mont. Ex.* 14. *Worm.* 104. It is of various Colours; as red, yellow, and whitish; the yellow are the least esteemed of all.

Many superstitious Virtues have been ascribed to this Stone, but at present it is in no Esteem.

The *Hyacinth* of the Antients, according to *Pliny's* Account, was different from this of ours, as it was of a shining Violet Colour, and like the *Amethyst*: But all the Shades we have in the Colour of the modern *Hyacinths*, are between red, pale, yellow, and white, without the least Tinge of blue.]

Of the Topaz-stone.

Pomet. THE *Topazes* that are used in Physick are Stones of different Magnitude, very heavy and transparent, altogether resembling the *Muscovy Glass* found in the Plaister of *Mont Martre*: This Stone is found in the *East*

and *West-Indies*, *Bohemia*, and *Germany*. The *Topaz* needs no other Preparation for Medicine than to be ground with Rose-water on a Marble like *Hyacinth* and other precious Stones.

The true *Topaz* of the Antients, which was afterwards called a *Chrysolite*, is a transparent Gem, of a pale green Colour, that seems to have some Yellowness, or a Gold Colour in it, very glorious; some will not have this to be properly the *Topaz*, but rather the *Chrysolite*, or Mother of the *Emerald*: It is reported to be good against *Hæmorrhages*, and all manner of Fluxes of Blood; as likewise to stop Bleeding. This Gem is so hard that the File cannot touch it. It has been a Stone of great Esteem and Value, not only for its own Glory and Brightness, but for its sacred Use recorded in Scripture. It is sometimes counterfeited with double Crystals or diaphanous Stones, with a proper green Foil interposed, and being thus set in Inclosures, with a like Foil underneath, the Cheat will be hard to discover.

Topazius, *Chrysolithus*, *Chrysopatius*, the *Topaz*, is a transparent precious *Lemery*. Stone, of a greenish Cast, mixed with a little Yellow, shooting forth golden Rays. There are two sorts of it, the oriental and occidental: The first sort is harder, finer, and more valued. We have them brought from *Arabia*, *Æthiopia*, and about the *Red Sea*. It is said they grow among the *Alabaster*, and some pretend them to be the Mother of the *Emerald*, because these two Stones are something like one another in their Colour. The second sort are found in *Bohemia*, and are larger than the Eastern kind, but not so beautiful.

[There are two kinds of the *Topaz*, the *Topazius* and *Chrysolithos*, which are much confounded among Authors. But the true Account of them is, that the *Topazius* of the Antients is what we, at this Time, call the *Chrysolite*; and what they called *Chrysolite*, we now call the *Topaz*.

The first is the *Topazius veterum*, quem recentiores perperam vocant *Chrysolithon*, *De Laet.* 46. *Chrysolithos Modernorum*, *Worm.* 106. *Topazius Veterum*, *Boet.* 207. This is what we now call the *Chrysolite*; and what the Antients called the *Topazius*, or *Chrysopasius*. It is a Gem of a green Colour, but fainter than that of the *Emerald*, and mixed with a Yellowness: The blended Rays of which two Colours in some Lights give the whole a reddish Colour.

The second is the *Topazius neotericorum veterum Chrysolithos*, *Worm.* 106. *Chrysolithos veterum*, *De Laet.* 49. *Mont. Exot.* 14. *Boet.* 210. This is what we now call the *Topaz*; but what the Antients called the *Chrysolite*: it is a pellucid Gem

of a shining yellow Colour, and is of two kinds, the oriental, which is of the Colour of the purest Gold, and very hard; and the *European*, which is soft like Crystal, and has often a greater or less Mixture of black in it.

Both these Gems have had great Virtues ascribed to them, but they are now never used.]

3. Of Emeralds.

Pomet. THE *Emerald* is a greenish Stone that is found in different Parts of the World; as *Æthiopia*, *Egypt*, *Persia*, and both the *Indies*. The highest prized, or most valued *Emeralds*, are those called the *Prime Emeralds*, in that they are commonly pure and neat, that is to say, of a fine beautiful Green, inclining to the Blue. There is some Appearance that *Emeralds* are found in Iron Mines, because I have seen where the Iron has stuck to them. It is by some affirmed, that the *Emerald* takes its green Colour in the Mine, according to the Degree of its Perfections, as Fruits ripen upon the Trees; which I cannot confirm, having never seen the Truth of it. They are seldom found genuine with the Druggist, therefore should be bought of the Lapidaries.

Some Authors have made twelve Kinds of *Emeralds*, as the *Scythian*, the *Bætrian*, *Ægyptian*, *Cyprian*, *Attick*, *Æthiopick*, *Medick*, *Calcedonian*, *Samian*, *Sicilian*, *Laconic*, and *Cyprian*, or *Chalcosmaragdus*; to which of late has been added a thirteenth, called the *Smaragdites*, or *Bastard Emerald*. This Stone has been of great Esteem, not only for its Glory, but the Use it was applied to, being set in the Breast-plate of Judgment.

The *Smaragdo-Prasinus*, *Smaragdites*, or *Bastard Emerald*, is a transparent green Gem, of a mixed Beauty, between a *Prasinus* and an *Emerald*. Being compared with the *Prasinus*, it has the Greenness of Grass, without Yellowness; but being compared with the *Emerald*, it has a yellowish Greenness, which is not in the *Emerald*. It is seldom perfectly transparent, because of some Clouds in it, and is of two kinds; first, the *Bohemian*, which is almost transparent; and, secondly, the *American*, which is but half transparent. This Stone is said to be diuretick, expels Gravel, hinders the breeding of the Stone, and eases Pains of the Kidneys, and the Gout.

Smaragdus, *Prasinus*, or the *Emerald*, *Lemery.* is a fine, green, precious Stone that is diaphanous, shining, resplendent, but moderately hard. There are two kinds, one oriental, and the other occidental. The first sort is harder, finer, and more esteemed. It represents by its agreeable Colour and Pleasantness the Ver-

dure of the Field, and fills the Eye with a sudden glaring Light: It is brought from the *East-Indies*. The second sort may be distinguished into two kinds, *Peruvian* and *European*; the *Peruvian* shews a very fine, pleasant, green Colour, but does not shoot its Rays like the oriental, and is sometimes filled with little greenish Clouds. These are plentiful in *Peru*, and pretty large. The *European* sort is not so hard or resplendent, and the least valued of all. They are found in *Cyprus*, *Great Britain*, and several other Places. The Western are generally much larger than those of the East; for they are sometimes met with as big as the Palm of a Man's Hand. Both kinds are proper to stop the Flux of the Belly, and Hæmorrhages, to sweeten the too acrid Humours, being finely powdered, and taken inwardly; the Dose from six Grains to half a Drachm.

[The *Emerald* to be used in Medicine is the *Smaragdus*, *Kentm.* 47. *De Laet.* 33. *Charlt.* 38. It is of a glorious Green, but more brittle than any of the other Gems. If thrown upon a clear Fire, it emits a fine Flame, and totally loses its Colour; which is a Proof that its Colour depends on a Sulphur, which is separable from it without destroying its Substance; for the Stone still remains hard and transparent, though Colourless like Crystal.]

4. Of Saphirs.

WE sell two sorts of Fragments of *Pomet.* *Saphirs*, to wit, the red and the blackish. They are of the Size of a Pin's Head, extremely hard, and therefore difficult to bruise or pound. The red, which are usually of the Colour of Wine, ought to be employed for physical Uses; for as to the blackish Fragments of *Saphirs* they are rather like Rust of Iron than a precious Stone, and turn the Confection of Hyacinth black when put into it. Some substitute in the Room of the red Fragments of oriental *Saphirs*, those little Stones, very common in *Holland*, that we call *Vermeilles*, or small *Granats*, which beware of, though it is not difficult to distinguish them, because the true *Saphirs* Fragments are of a very fine, clear, transparent Red; which are contrary to the *Granats*, that are of a very deep Red.

Saphirus, vel *Sapphirus*, or the *Saphir*, is a fine, precious, brilliant, diaphanous, *Lemery.* resplendent Stone, of which there are two sorts, one called the Male, the other the Female. The Males are of a pale blue, or a Water of the Diamond Lustre. These last are called white, or Water *Saphirs*; they are less enquired after than the blue. The Female *Saphirs*

saphirs are of a deep blue; these are more valuable, and especially such as come from the *East-Indies*; as *Calecut*, *Pegu*, *Bisnagar*, and *Zeilan*. They are found likewise in several Parts of the Western World, as on the Borders of *Bohemia* and *Silesia*; but they are neither so perfect nor fine as the Oriental.

They use in Physick the Fragments or Pieces which the Lapidaries cut off from the *Saphirs*, which are much about the Size of large Pins Heads, reddish or blackish; but the red are preferred, because the black are full of Iron Stone; we may perceive they have some Analogy to the Load-stone, for they will be attracted like Iron. There are a great many Virtues attributed to the *Saphirs* which they have not; as the fortifying the Heart and other noble Parts, purifying the Blood, resisting of Poison. Their true Properties are to stop Fluxes, sweeten the Blood, and dry up Ulcers of the Eyes.

[The *Saphir* is the *Lapis Saphirus*, *Matth.* 1387. *Saphirus*, *Aldr. Mus. Met.* 971. *Kentm.* 48. *Charlt. Foss.* 38. It is a very hard Gem, of a beautiful Sky-blue, which, as it is deeper or paler, makes the Distinction of Male and Female *Saphirs*, as they are called. The *Saphir* comes nearest the Diamond in Splendor, Transparency, and Hardness; and there is a kind of it wholly pale, which is sometimes made to pass for a Diamond, but it is neither quite so hard nor so brilliant. The finest *Saphirs* are the Oriental, which are brought principally from the Island of *Ceylon*. The *European* are found in *Silesia* and *Bohemia*. The *Saphir* loses its Colour like the *Emerald* in the Fire, and then looks very like a Diamond.]

5. Of the Ruby.

Pomet. THE *Rubies* are likewise little reddish Stones that are brought us from the *East-Indies*, and are of very little Use in Physick, for which Reason I shall say nothing of them, nor of a great many others which we sometimes sell, the Names of which are subjoined, referring the Reader to a Book, entitled, *The Perfect or Compleat Jeweller, or, The History of precious Stones*, composed by *Anselmus Boetius de Boot*, Physician to the Emperor *Rodolph* the Second; or to the *Indian Mercury*, made by *Rosnel*. The precious Stones we have, besides those mentioned before, are the *Diamonds*, the *Amethysts* of *Auvergne* and *Cartagena*, the *Agats*, the *Berils*, the *Sardius*, the *Granats*, the *Malaquits*, and several sorts of Marble, *Florence Stones*, &c. And as I have seen the vast Difference betwixt the Stones that we sell, and the fine Stones the Lapidaries use, I advise all those who would make the Confection of *Hya-*

cinth, to take rather the Chippings of the fine Stones, than fancy he can buy better at the Drug-gifts. I am, however, of the same Opinion with those who allow no other Virtue in all the precious Stones, than to absorb Acids.

Rubinus, *Carbunculus*, *Pyropus*, *Anthrax*, the *Ruby*, or *Carbuncle*, is a fine, *Lemery.* diaphanous, precious Stone that is very hard, and resists the File. It is resplendent, and of a Colour as red as Blood, mixed with a little Tincture of blue. There are several kinds of it; but the finest, hardest, and most valuable, is that from *Zeilan* in the *Indies*. There are some likewise in *Gambaya* and *Bisnaga*; but these are not so fine.

There is assigned to the *Ruby* the Virtue of resisting Poison, strengthening the Vitals, driving away Melancholy, restoring of lost Strength; but we know by Experience it has no other Quality than that of an Alkali Powder, that sweetens the Sharpness of the Humours, and breaks their Points, and consequently stops the Flux of the Belly; Dose from half a Scruple to two Scruples. It is called *Rubinus* from its red Colour, and *Carbunculus* from its Reflection, looking like a red-hot Coal of Fire.

[The *Ruby* is the *Carbunculus*, *five Rubinus*, *Aldr. Mus. Met.* 957. *Rubinus verus*, *Boet.* 144. *Carbunculus*, *Kentm.* 50. It is a pellucid Red Gem, extremely hard, found in greatest Perfection in the Island of *Ceylon*. It is divided, on Account of its Degrees of Splendor, into four kinds, the *Pyropus*, *Balafius*, *Rubicellus*, and *Spinaleus*. But as those Distinctions are of no Use in a Work of this kind, I shall not enlarge on them.

This, like the rest of the Gems, has had many great Virtues ascribed to it; but the present Opinion is, that they have no other than those of all alkaline Absorbents: however perhaps, it is too rash a Censure, and our Stomach may act upon them, as Fire does, separating their Sulphurs, in which their Colour consists; and those Sulphurs may, for ought we know, be able, notwithstanding their small Quantity, to do great Things, as indeed it is a very idle Thing to judge of the Force of a Medicine by its Quantity, the most powerful of all generally acting in the smallest.]

6. Of Lapis Lazuli, or the Azure Stone.

THE *Azure Stone*, which is commonly called *Lapis Lazuli*, and by some *Lapis Cyaneus*, and *Lapis Stellatus*, is a heavy Stone of a Sky-blue, sometimes full of Rock Stone, and frequently streaked with Veins of Copper, which the Antients, and some Moderns, have thought

thought to be Gold. The greatest Part of this Stone that we have, comes from *Persia* and the *East-Indies*; some affirm that it is usually found in Gold Mines, and that it is a *Marcasite* of that Metal: However it is certain that this Stone is got out of Quarries, as other Stones are here, which is the Reason we have it of all Sizes; the *Lapis Lazuli*, to be perfect and fit for making the *Ultra-marine*, which is the chief Use it is put to, except the fine Works made of it, ought to be heavy, of a deep Blue, like fine Indigo, with as few Copper or sulphureous Veins as possible, and take Care it be not rubbed with Oil Olive, in order to make it appear of a deeper Blue; but the Cheat is not hard to discover, because it ought to be of as fine a Blue within as without; likewise refuse such as is full of Stones, and the pretended Veins of Gold; for that, when it is burnt to make *Ultra-marine*, will stink extremely, having a sulphureous Smell, which shews that its Veins proceed not from Gold.

There is an Error some People are guilty of, in believing, as some have pretended, that this Stone, when fine, will encrease its Weight in the Fire: This is certain, that the finer this Stone is, it will lose the less in the Fire; and that there is some of it that loses so little that it is not worth speaking of; but let it be never so good, it will always lose something; so far is it from being encreased in Weight: You ought to put the Stone into the Fire to see if it be good, for if so, it will not change its Colour for being heated hot. The Choice of this Stone is quite other than has been described by others, who say, that that which is full of yellowish or golden Veins ought to be most valued; which I maintain to be false, since the more it is so, the less it is esteemed, especially by those who use it to make *Ultra-marine*. You must beware that it be not a greenish Stone, very common in *France*, which is found about *Toulon*; or that it be not a counterfeit Stone, made up of Tin and *Zaffre*, as has been observed in the Chapter of *Enamels*. This Stone is of some Use in Medicine, because it is put into several Galenical Compositions, as Confection of *Alkermes*, &c. There are Authors who attribute great Virtues to this Stone, and amongst others Monsieur *Demeuve*, to whom the Reader may have recourse; and there are several others who say that *Lapis Lazuli*, and the *Armenian* Stone, are almost alike, which will be found to be false, as you will see in the next Chapter.

Of Ultra-marine.

Pomet. *Ultra-marine* is, properly speaking, a Precipitate made from *Lapis Lazuli*;

some say it took its Name of *Ultra-marine*, from being made beyond the Seas; the first of the kind coming from *Cyprus*; but others will have it that the Name was given it because this Blue is much more beautiful than that of the Sea. A Friend of mine assured me that the first *Ultra-marine* was made in *England* by one of the *East-India* Company there. You ought to chuse that which is of the highest Colour, well ground, which is known by chewing of it betwixt the Teeth; if it is gritty, it is a Sign that it is not well ground: And to discover if it is genuine and not sophisticated, heat a little of it red-hot in a Crucible; if its Colour is not changed, it is the true; for if it is adulterated there will be black Spots in it: Its Use is for Painting in Oil and Miniature. The manner of preparing *Ultra-marine* is described in so many Books, I thought it needless to repeat it here; I shall only say, that those who prepare it make it into four sorts, which proceeds from nothing else but the different Washings of the Powder, whereof the first is abundantly more beautiful than the others.

Lapis Lazuli, *Lapis Cyaneus*, *Lapis Cæruleus*, or the *Azure Stone*, is of different Sizes and Figures, being opaque, heavy, and of a blue Colour, intermixed with Streaks of Gold and Copper: It is found in Quarries in the *East-Indies*, and in *Persia*, and some say in the Gold Mines; its Use is chiefly to make *Ultra-marine* of, for which Purpose chuse the cleanest, weightiest, of the highest Colour, and best Blue; it contains a great deal of Sulphur and Salt. To make *Ultra-marine*, they calcine this Stone, and grind it fine on a Porphyry, and mix it up in a Paste made of fat Pitch, Wax, and Oil; then they wash this Paste well to separate the blue Part, which precipitates to the bottom in a very beautiful Powder; they pour off the Water leisurely, and dry this Powder, which is for the Painters Use. *Lapis Lazuli* prepared purges melancholy Humours, fortifies the Heart, and is used in the Confection of *Alkermes*; the Dose from half a Scruple to a Drachm. There is found near *Toulon* in *France*, in *Germany*, and several other Parts of *Europe*, a false or Bastard *Lapis Lazuli*, that is greenish and thicker, which is employed for common Uses.

[The *Azure Stone* is the *Lapis Lazuli*, *Worm.* 65. *Charlt. Foss.* 27. *Cæruleus Lapis*, *Matth.* 1354. *Lapis Cyaneus*, sive *Lazuli*, *Ald. Mus. Met.* 870. *Cæruleum Nativum*, *Wood. Att. T.* ii. P. 1. p. 42. It is an opaque hard Stone, of the Colour of the *Saphir*, with gold-coloured Specks and Veins, and is harder than the *Armenian* Stone. It is found in Gold and Copper Mines, and is of two kinds, the Oriental, which is brought chiefly from *Asia* and

and *Africa*, and stands the Fire without losing its Colour. Of this the *Ultra-marine* is made; and the Occidental, found in *Germany* and *Italy*, which loses its Colour by Fire, or by Age, or many other Accidents, and in time turns green. The blue Colour of this Stone is owing to some Particles of Copper it contains; and in Medicine it is accordingly emetick and purgative. The Antients also acknowledged a styptick Virtue in it; for which Reason they gave it a Place in the Confection of *Alkermes*, &c. And certain it is, that no ill Effect ever appeared from the taking that Medicine, while it was a constant Ingredient in it. However, as it cannot well be supposed to add any thing to the Virtues of it, it is at present left out of it in the College Dispensatory.]

7. Of the Armenian Stone.

Pomet. THIS is a little Stone usually of the Size of a Bullet, of a greenish Blue without and within, adorned with small white glistening Sparks rising beyond its Surface, like Spar, or small Diamond Sparks. They attribute great Virtues to this Stone, as that it is good to cure the *Falling-Sickness*, *Melancholy*, and the like. This Stone is ground and washed to free it from the Spar and little Sparkles, which look like Gold, though they are only Sand; and afterwards dried and brought to us by the Name of *Powder Green*, or *Verditer*; which is used by the Painters, but more especially by those, who, to encrease their *Mountain Green*, mix equal Parts of both together to make it come cheaper, that so they may get more Money by it; for which Reason never buy any *Mountain Green* but of Persons you can trust, and such as has the Marks I gave, when treating of it; and when put upon Paper, stains it not, but is like Sand, which is a Sign it is not mixed with *Verditer*. We sell several sorts of *Verditer*s, which have no other Difference but according to the Preparation given them; the finest sort ought to be very dry, fine, and of a high Colour.

Armenus Lapis, seu Lapis Armenis, Lemery. seu *Melochites*, the *Armenian Stone*, is of different Shapes and Sizes, but most commonly round, uneven, rough, as big as a Nut, of a Mixture of Colours, blue, green, white, &c. It is brought from *Armenia*, whence it derives its Name; but at present it is also found in *Germany*, as in the County of *Tyrol*; it differs from *Lapis Lazuli*, in that it is not so blue, but fuller of a drossy Stone and other Impurities; and that this is taken from the Silver Mines, whereas the other is found in the Gold Mines. Chuse that which is of the deepest Colour. They grind this Stone and

wash it, to separate the finer Parts, or the Sand which shines like Spangles of Gold; and when dried, they sell it by the Name of *Verditer*, for the Painters Use. This *Armenian Stone*, prepared, is deterfive and desiccative, or drying, being outwardly applied; and inwardly purges melancholy Humours; it is good for the Epilepsy, &c. the Dose from a Scruple to a Drachm.

[The *Armenian Stone* is the *Lapis Armenus*, *Worm.* 66. *Charlt. Foss.* 27. *Armenium*, *Aldr. Mus. Met.* 351. Copper Ore of a Sky or pale blue Colour, *Woodward*. This is principally found in Silver Mines. It is an opaque soft Substance of the *Lapis Lazuli* kind, with gold-coloured Specks and Spots of green, bluish, and black: It is of the same Virtues with the *Lapis Lazuli*, as containing the same Principles, but is more strongly purgative. The Painters make of it a very fine Blue, with a greenish Cast.]

8. Of Smalt, or Powder Blue.

SMALT is either a Composition, or a *Pomet.* Stone pulverized, which we have from *England* and *Roüen*, whither it is brought by the *Swedes*, *Hamburgers*, and *Danes*: The greatest Part of this *Smalt* comes from *Dantzick* in *Poland*, as well as several other Colours, with Zink and Tin-glafs; but this being a Trade known but to few People, those who deal in these Commodities directly from *Dantzick*, are able to sell cheaper than those who trade from *Holland*, *England*, or *Roüen*. After all the diligent Enquiries I could make, I have found it impossible to find out what this *Smalt* is, some assuring me that it was a Composition made at *Roüen*; but as those who made it kept it as a Secret, I never could discover of what it was. It ought to be very fine, of a deep Colour, and as dry and like to *Ultra-marine* as possible; its Use is for the Painters.

Smalt, or *Cinis Cæruleus*, is either a powdered Stone, or else a Composition *Lemery.* of a blue Colour; which is brought from *Poland*, and is used by Painters.

[*Smalt* is the *Encaustum Cæruleum*, used by the Painters, &c. It is made of *Cobalt*, Pot-ashes, and Flint-stones, or Sand, melted together into a vitreous, opaque, bluish Mass, and afterwards ground to Powder in Mills. The greatest Quantity is made in *Saxony* and *Germany*: It is never used in Physick.]

9. Of the Jasper.

THERE being various sorts of *Jaspers*, *Pomet.* such as the Green, the Purple, *Cerulean*, *Aurora*, or Crystal-like, I shall speak only of that

that which is sold in the Shops, which is the *green Jasper*; and if it had not been of some small Use in Medicine, I should not have spoken of it. Being a very precious Commodity, it is very liable to be counterfeited in Glafs. Chuse such Pieces as are of a fine deep Green, smooth, and shining, full of red Spots, as if they were little Drops of Blood, and which can take no Impression from the Point of a Needle drawn upon them; which is a Sign that they are truly Oriental. Some People affirm, that the green Jasper is very proper to cure the Epilepsy, and that it is a good Cordial. It is prepared as the *Hyacinth* and other precious Stones.

Jaspis, the *Jasper*, is a fine, hard, *Lemery*. smooth, resplendent, precious Stone, which differs little from the *Agate*, only that it is not so hard and pure: There are a great many kinds of it, but the Oriental is the best. It ought to be very hard, of a deep Green spotted with red; and it is of some Use in Physick, ground fine upon a Porphyry. The prepared Powder is astringent, proper to stop Blood and the Scour of the Guts. Great Virtues are assigned it in the Epilepsy, also to strengthen the Stomach, and bring away the Stone in the Kidneys, &c.

[The *Jasper* used in Medicine is the *Jaspis*, *Boet.* 250. *De Laet.* 79. *Charlt. Foss.* 32. It is an opaque Stone, of a mixed Green, with Spots of Red like Blood: It is found in the *East-Indies*, and is supposed to have the same Virtues with the *Cornelian*, which are, the stopping Hæmorrhages, and remedying the Effects of Poisons; but these are both supposed imaginary, and neither of the Stones ever now used in Medicine.]

10. Of the Jade Stone.

Pomet. **T**HE *Jade* is a greenish Stone, inclinable to Grey, extremely hard, and very rare. This Stone is little used in Physick, but pretty much in several sorts of Works that are very valuable, it being very difficult to cut. The *Turks* and *Poles* use a great deal of *Jade* to make Handles for their Knives, Sabres, Swords, and other Things, which they adorn with Gold. The Oriental is the finest *Jade*.

Jade is a very hard Stone, of a greenish grey Colour. The finest comes from the *East-Indies*. The *Turks* and *Poles* make several Uses of them, and it is difficult to work because of its excessive Hardness. Some pretend, that applied to the Region of the Kidneys, they are proper to bring away Stone and Gravel; but I can give no Credit to such Remedies.

[The *Jade* is the *Lapis divinus*, *Boet.* It is a Stone very like the *Lapis Nephriticus*, but extremely hard; it is much used in some Parts of the World for Toys, but has never, I believe, been given inwardly, though in common Use among the savage *Indians* as an Amulet.]

11. Of the Nephritick Stone.

THE *Nephritick Stone* is a greyish *Pomet.* Stone, with a little mixture of Blue in it, so that it is usually of a bluish grey Colour, being fat and oily like *Venetian Talck*. This Stone is much valued by certain Persons for the Cure of the Gravel, which makes it so scarce, and so much enquired after. It performs its Business by hanging about the Thigh of those who are troubled with the Stone or Gravel in the Kidneys, from whence it is called the *Nephritick Stone*. The Dearth and Rarity of this Stone is the Reason why some substitute in its stead a kind of green Marble of *Italy*, called *Malaquitte*, and cut and carve it like a Bird's Head, because the Antients believed that the true *Nephritick Stone* resembled a Bird's Head, or the Beak of a *Perroquet*. The true *Nephritick Stone* comes from *New Spain*, and whoever would know further of it may read Mr. *Worms*, who has writ a large Description of it, too long to be inserted here.

Lapis Nephriticus, or the *Nephritick Stone*, is of different Sizes, pretty hard, *Lemery.* opaque, of a bluish Grey or Ash-colour, but sometimes mixed with White, Yellow, or Black, and is not perfectly smooth, because it is unctuous like *Talck*. It is found in *New Spain*, sometimes with the *Jasper*, and sometimes alone. Some reckon it among the kinds of *Jaspers*, making no great Difference, but only that this is the harder: For the most part they are found like Whet-stones, in the Fields in great Lumps, so big, that a Cup may be made of them. *Carolina* affords pretty large ones, about eight Inches long, three broad, and two thick; and of an ash-coloured Green: They are likewise gathered in *Bohemia*, and several Parts of *Spain*; but these are not so much esteemed as what come from *America*.

This Stone has the Property to ease the Stone Cholick, to break the Stone in the Reins, and expel Gravel by Urine, being hung about the Neck, Thigh, or Arm: Some prescribe it to be taken inwardly, from four to fifteen Grains. Of latter Years there is brought into Use for the same Diseases, a brown, smooth, shining Stone, which they call, from its great Virtues, the *Divine Stone*; this breaks the Stone in the Kidneys, and forces it away by Urine; they tie it in their Clothes about the Back.

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[The *Nephritick Stone* is the *Lapis Indicus Nephriticus*, Aldr. Mus. Met. 706. *Lapis Nephriticus*, Mont. Ex. 14. Charlt. Foss. 33. Worm. 95. It is a Stone of many Colours, as, green, blue, yellowish, whitish, and dusky brown, but always having more of the green than of any other Colour. It is found in *America* and some Parts of *Europe*, and is supposed to have great Virtues, but is scarce ever used at present.

The *Divine Stone*, mentioned here by *Lemery*, is the *Jade* mentioned in the last Chapter; and the *Malachite*, often substituted for it, is the *Malachites vel Molochites*, Worm. 263. De Lact. 87. *Malachites*, Aldr. Mus. Met. 900. It is of the *Jasper* kind, and is found in *Cyprus*, *Misnia*, and *Tirol*, but is never used in Medicine.]

12. Of Venetian Talck.

Pomet. THE *Venetian Talck* is a kind of greenish Stone, in Scales or Flakes, which though it seem fatty in the handling, is nevertheless very dry and heavy; the finest is that which is found in the Quarries situated near *Venice*, from whence it is called *Venetian Talck*; it is found also plentifully in *Germany*, and about the *Alps*. The best *Talck* is that which is in large, white, greenish, shining Stones, that, being broken, sparkle like Silver Spangles, and which, being separated into small Leaves, is white, clear, and transparent; but take care that it be equally fine throughout; for that which is in great Stones is very subject to be bad, by reason of a great many yellow or reddish Veins that are found within, accompanied with a kind of Earth that spoils the Sale of it. There is some also which, instead of being of a greenish White, is of a reddish Yellow; so that we had better take that which is in moderate Pieces, which we may know at sight.

Talck is much in regard with the Ladies of Quality, who use it for a Cosmetick; and as it is exceeding difficult to reduce it into Powder, or even to calcine it, the way is now to grate it with a Fish-skin, and then to searce it; so using it as Occasion shall require. Hence it is, that almost none but such *Talck* as is in moderate Pieces, of a Size fit to be held in the Hand, is now called for.

Venetian Talck, while it is whole, is of a greenish Colour; but being broken, or divided into thin Scales, is white; it is known from *English Talck* by its Friability, its green Colour, and Fixedness in the Fire: For some who have kept it forty or fifty Days in a Glass-house Fire, have taken it out at the end of the Time, and found no Alteration in it, neither in respect of Resolution, Colour, or Weight, but it has come out absolutely the same thing as it went in. This *Talck* therefore

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being of so fixed a Nature, our Labour now must be to shew how to open its Body, in order to make those Preparations of it which we desire, at least the noble White, which Ladies, with so much Curiosity and Charges, seek after and pursue. It is true, there are a great many Men that boast what Preparations and Secrets they have of *Talck*; but this we certainly know, that there is no liquid Substance of it yet invented or known, made out of the simple thing itself; but such as is compounded by the mixture of such Salts as are able to penetrate the Stone; so invincible is the Fixedness of the true *Venetian Talck*: Therefore to attempt to calcine it, without the Addition of some piercing Salt, is Vanity; but by the help of some Salts, and acrid Spirits, a good Cosmetick may be made of it, to change and whiten the Skin.

The Antients, and especially the *Arabians*, were sometime of opinion, that from *Talck* might be drawn a Remedy of such Efficacy, as ever to preserve the Body in good Case; for which Reason they gave it the Name of *Talck*, as much as to say, an equal Disposition of Body, according to which it is in perfect Health: And from hence, undoubtedly, hath proceeded the vulgar Error concerning an Oil of *Talck*, which is so much commended, and to which such extraordinary Virtues are attributed; and so prevalent hath this Error been, and still is at this Day, that whoever could find the Secret of getting an Oil from *Talck*, without the Addition of Salts or Acids, might be sure to sell it for its weight in Gold; yea, I may venture to say, twenty times more. But since, as I believe, the high Commendations and wonderful Virtues usually ascribed to it, proceed only from a Supposition that it can never be had, I shall say no more of it, but that some Persons, who flatter themselves with a Belief that they have the Secret of making it, affirm that it is incomparably good for whitening the Skin, smoothing the Face, and, in a word, to make old People renew their Youth.

Some say, if *Venice Talck* be heated red-hot, and put into an Iron Mortar almost as hot, it may be beaten in a small time to a most fine impalpable Powder, which being searced, may be mixed with *Unguents* and *Pomatum*, and used as other Cosmeticks of the like kind. This *Talck*, thus pulverized, may be strewed among Snail Shells, and left in a glazed Pipkin till they have sucked it all up; then having bruised all together, put the Mixture into a Glass Cucurbit, covered with its Head, and distil the whole Mass, and you will have a Cosmetick Water, good to cleanse and beautify the Skin with.

We have another sort of *Talck*, brought us from *Muscovy* and *Persia*, which they call Red or Leaf *Talck*,

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Talck, because it is of a reddish Colour, and easy to be divided into Leaves as thin as you please. This Red or Leaf *Talck* is only used, so far as I know, by the Monks and Nuns, who put it, instead of Glass, before their Pictures and *Agnus's*; but they do not, as some Authors affirm, employ to this Purpose the *Venetian Talck*. This then, as I have said, being the only Use of the Leaf *Talck*, we ought not to meddle with any but what is in large Leaves, and when split, or divided into very thin Pieces, is of a crystalline Clearness and Transparency. There is not almost a more curious Commodity in the World than Leaf *Talck* with the required Qualifications, forasmuch as it is very rare to be found: It is a thing so very hard to understand, that I would not advise any one to buy any but what is approved by those who work in it; that which, being thick, is blackish, and may be divided into Leaves extremely thin and transparent, is judged to be the best.

Talcum, or *Talck*, is a kind of Stone, *Lemery.* or a mineral Matter, that is fine, white, smooth, soft to the Touch, shining, and transparent, dividing into Leaves or Scales that will not burn: Some call it *Stella Terræ*, because it shines like a Star: There are two kinds of it, one called *Venetian Talck*, and the other *Muscovy Talck*; the *Venetian* sort is soft, scaly, heavy, and appears greasy to the touch, though it is dry, of a Silver Colour, tending to green, something transparent: Chuse the finest white shining Pieces, upon the green Cast, that separate into little nice clear Leaves, or Flakes, that shine like Pieces of Silver. When you would reduce this into Powder, rasp it with a Sea Dog's Skin, or rather calcine it in a Crucible about a Quarter of an Hour; then beat it in an Iron Mortar almost red-hot, and sift it through a Sieve. It is used in Cosmetick Pomatums by the Ladies.

The *Muscovy Talck* is hard, smooth, shining, and soft to the Touch, dividing or breaking into thin Leaves, that are almost as transparent as Glass, and sometimes it is reddish: This comes from the Quarries in *Muscovy* and *Persia*. Chuse the finest and clearest. It serves them for Lanthorns, as we use Horn; but the *Talck* is more commodious, for it is more transparent, and not so subject to burn. *Talck* is difficult to reduce to Ashes by the Fire, because the Pores of it being small, the Parts of Fire slide through without making any Impression. I attempted to calcine both sorts by a Burning-glass: That of *Venice* was changed by the solar Fire into a grosser, yellowish, opaque Matter; and that of *Muscovy* into a light farine, being very fine white Powder.

[*Talck* is the *Talcum*, *Aldr. Mus. Met.* 685.

Talcus fossilis, *Calc. Mus.* 458. *Talcum* alias *Stella terræ*, *Charlt. Foss.* 24. It is a shining fissile Stone, easily divided into thin Laminæ looking like Silver Spangles: There are many Kinds of it, but the Greenish or *Venetian*, the *Talcum Viride*, *Mont. Ex.* 14. is most esteemed as a Cosmetick, which is the principal Use it stands commended for. There is a more silvery kind, much esteemed by the Chymists, and called *Argyrolithos*; and a yellowish, which they call the Solar *Talck*. They think by an Oil of these *Talcks* to turn Quicksilver into Silver; but they do not consider that what they call Oil of *Talck* is entirely the Product of other Substances mixed with it.

The best way to powder the *Venetian Talck* is, to heat it several times over in the Fire, and quench it in cold Water, then levigating it on a Porphyry, it becomes a fine shining white Powder, very smooth to the Touch, and fit to mix in Pomatums.

What our Authors call Leaf *Talck* is the *Lapis Specularis*, *Kentm.* 26. *Worm.* 56. *Mont. Ex.* 14. *Glacies Mariæ seu Lapis Specularis*, *Koning. Lapis Mariæ Neotericis*, *Charlt. Foss.* 23. It is brought from *Spain*, *Muscovy*, &c. It is said to be a good Medicine in Epilepsies, but its principal Use is in small Works, instead of Glass or Horn, for the preserving Microscope Objects, &c.]

43. Of Briançon Chalk.

THE *Briançon Chalk* is a kind of Stone, or a mineral Substance, almost like *Venetian Talck*, but harder, and that does not so readily split or separate into Scales: There are two kinds of it, one white, and the other green; they are found in the Quarries or Pits near *Briançon*: They serve to take Grease Spots out of Clothes, and for Taylors to mark or score with. Chuse the neatest, smoothest, green, and soft.

[*French Chalk* is the *Moroëthus Dioscoridis*, *Moroëtes Plinii*. It is an Astringent, is good in Hæmorrhages, and is used with Success in Collyriums for Ulcers of the Eyes.]

15. Of Spalt or Spaad.

SPALT or *Spaad* is a scaly bright Stone, *Pomet.* very like Parget Stone, except that this is whiter. They find abundance of these Stones in *Germany*, especially about *Augsburg*; there are some likewise in *England*, but not so good. We sometimes see Fragments of this Stone adhering to and mixing with Frankincense, a Sign that it is found in the Places whence it comes. It should be in long brittle Scales, that may be easily crumbled to Powder

Powder with the Nail of one's Thumb, which cannot be done by that of *England*, being more hard. *Spalt* is used by several sorts of Workmen, being said to be good to assist the Founders in melting of their Metals; which I cannot affirm to be Fact, having never seen it tried.

Spalt is a scaly Stone that is bright, *Lemery.* and looks like Plaister-stone, or Cryстал of *Montmartre*, but it is much whiter. It is met with in *England* and *Germany*. The Founders use it to flux their Metals with. It is deterfive and drying, outwardly applied.

13. Of the Lapis Judaicus, or Jews Stone.

Pomet. **T**HE *Jews Stone* is of different Sizes and Figures; but the most common Size is that of an Olive, adorned with little Streaks or hollow Lines, running from one End to the other, and sometimes it is altogether smooth. This Stone is usually grey, and sometimes of a reddish grey, and shines like our little Flints, of which I believe it to be a Species. These Stones are brought us from different Parts of *Judæa*, from whence they take their Name; they are likewise called *Syrian* and *Phœnician* Stones. This Stone, though it be like a Flint, it is not so hard, yet not so easy to break as some Authors have asserted; but being broken, it is of a whitish Grey, and shining. Mr. *Charas*, in his Book of Chymistry, at the 821st Page, says, that this Stone, being calcined with Sulphur, distilled Vinegar, Spirit of Salt, and Spirit of Honey, there may be drawn from it a Salt that is admirable for breaking the Stone; where those who are desirous to prepare it, may be instructed therein.

Lapis Judaicus, Lapis Syriacus, Lemery. Phœnicites, Tecolithus, or the Jews Stone, is of various Forms and Bigness, but most usually is shaped like a small Olive, streaked all over with Lines that run through the length of it, and are equally distant one from another: Some are found smooth without any, and some in a cylindrical Form. The Colour is grey, and sometimes reddish without, and whitish within. It appears to be hard like a Flint, but is soft, and may be easily beat to Powder: They are distinguished into Male and Female; the Male is that which is large, long, and of a cylindrical Figure; the Female is that which is of the Shape and Size of a small Olive. They are both indifferently used in Physick, being first ground to a fine Powder on a Marble: This Powder is given to stop Fluxes of the Belly, to provoke Urine, and to break the Stone in the Kidneys and Bladder.

[This is the *Lapis Judaicus, Kentm. 28. Boet.*

408. *Charlt. Foss. 29. Radiolus Glandularius sub-cinereus major partim striatus, partim tenuissime punctulatus. Lang de Lap. 127. Radiolus Glandularius seu Lapis Judaicus, Boetii Lhuyd. Lith. Brit. 49.* They are found of various Lengths, Colours, and Thicknesses, and are the petrified Spines of a large Species of the *Echinus Ovarius*, or *Sea Urchin*.

They are said to be diuretick and lithonriptick, but are little used at present.]

16. Of the Lapis Lyncis, or Thunder Stone.

THE *Belemnites*, called also the *Lynx Pomet.* Stone, is a kind of Stone made in a pyramidal Form, to which the Antients gave the Name of *Belemnites*, from its resemblance to a Dart or Arrow; and others, of *Daetylus Idæus*, from its likeness to a Finger, and because it is found on Mount *Ida*; others say it was called *Lapis Lyncis*, because it was believed that it was formed from the Urine of the *Lynx*. This Stone is harder than the *Jews Stone*: They attribute the same Virtues to it: Mr. *Charas* has told me it might be prepared after the same Manner, and used for the same Purposes. This Stone being broken, is of the Colour of Horn in the Cavity, in which is found a sort of grey dry Earth, of an insipid Taste, and like to be good for nothing. At the End of the Stone there also appears, as it were, the resemblance of a Sun. Plenty of these Stones are found about *Paris*, in digging and labouring the Ground, especially in sandy and gravelly Soils.

Belemnites, five Lapis Lyncis, five Daetylus Idæus, the Thunder Stone, or Lemery. Thunder-bolt, is about the Length and Thickness of a Man's Finger, sometimes more, and sometimes less, round-pointed, or in a pyramidal Form, like an Arrow. They are found of different Colours, sometimes white, sometimes grey, and sometimes brown; brought usually from *Candia*; but they come likewise from *Germany*. They find the same about *Paris*, in the sandy Grounds; and there are two sorts of them, one, that being put upon the Fire will yield a bituminous Smell, and the other none at all: The first is plainly that which the Antients called *Lyncurium*, and believed falsely to be a kind of *Succinum*, or Amber, that was made from the Urine of the *Lynx* coagulated. The Stone being broken, they find in its Concavity, that looks of a Horn-colour, a little dry grey Earth, without Smell or Taste. This Stone is used to break the Stone in the Kidney, and to expel it by Urine, being taken inwardly. It is also used externally to cleanse and dry Wounds. It is ground on a Marble to reduce it to Powder.

[The *Thunder Stone* is the *Lapis Lyncis*, *Schrod.* 353. *Belemnites Lapis*, seu *Daëtylus Idæus*, *Boet.* 476. *De Laet.* 150. It is a rounded oblong Stone, ending in an obtuse Point, of different Colours, sometimes solid, and sometimes hollow, and distinguished by Lines drawn from the Axis to the Circumference, and with a Fissure or Slit runing the whole Length: They are commonly about two Inches long.

It is an Error to think this the *Lapis Lyncurius* of the Antients; for it is evident, that *Dioscorides*, by that Word, understood another Stone, which some at that Time thought the indurated Urine of the Lynx.

It is said to be a powerful Lithontriptick, but is never used at present.]

17. Of the Bolognian-stone.

Pemet. THIS is a heavy Stone of a shining Silver grey, very like in Figure to the *Nephritick-stone*, which is found very commonly about *Bologna* in *Italy*; whence it takes its Name. This Stone is of no other Use, than, after Calcination, to make a kind of *Phosphorus*, of which *Mr. Lemery* treats largely, and better than any who have gone before him, at the End of his Book of *Chymistry*; and likewise *Mr. Worms*, he having writ a long Discourse of it, whither those who desire to make it, may have recourse. The *Bolognian-stone* is not yet well known amongst us, which is the Cause we sell so little of it. Some call this Stone calcined, the *Sun* or *Moon Sponge*, the *illuminated Stone*, *Lucifer*, *Cassiolanus* his Stone, or *Kercher's Phosphorus*.

Lapis Bononiensis, *Chrysolapis*, or the *Lemery.* *Bolognian-stone*, is a Stone whereof a *Phosphorus* is made. It is ordinarily of the Bigness of a Walnut, bunched, uneven, flat-tish, and disposed in such a Manner, that the Side opposite to the Bunch or Knot, made a kind of Cavity. It is heavy, grey, soft, shining in several Parts, crystalline within, almost like *Talck* of *Montmartre*. It is found in several Parts of *Italy*, but chiefly at the bottom of Mount *Paterno*, which is a Part of the *Alps*, and distant from the City of *Bologna* about a League. They are easily discovered after the Floods of Waters that happen from the great Rains; for then the Earth is washed and cleaned that furrounded them, and hindered them from being seen. They are distinguished from other Stones of the Mountain by little Sparks that appear on their Surface; and we may see, in the Cabinets of the Curious, some of those that weigh to five Pounds. These large Stones are no

otherwise valuable than for their Scarceness, they being more earthy than the small ones, and not so good to make the *Phosphorus* of.

The best *Bolognian-stones* are those which are found covered on the Outside with a thin, white, and opake Crust; but these are very rare. And since we cannot often come at them, we use the common sort, which should be chosen with the fewest Spots, and bright. The worst are those where there appear Veins of Vitriol or Iron: These contain in them much more of Sulphur and Salt.

The *Bolognian-stone* is prepared and reduced into a *Phosphorus*, by a moderate Calcination, that purifies and exalts the Sulphur more than it was. This Calcination is made in the following Manner: Take seven or eight of these Stones cleansed on the Outside with a Rasp, or Knife, and powdering very finely one or two of the most shining of them in a Brass Mortar, throw the others whole, one after another, into clear Water; and having taken them out, cover them entirely over with the Powder, by rolling them in it, that they may lick up as much as they can; then put them into a little Furnace or Stove, with a Brass Grate, upon which you must lay them in Order, with a Fire under them to calcine; which when done, let the Fire go out of itself; and when all is cold, take off your calcined Stones gently from the Grate; separate the Crust, which comes from the Powder in which you have rolled them, and keep the Stones in a Box with Cotton; preserve likewise the Crust, which is to be reduced into an impalpable Powder.

These calcined Stones are the *Phosphorus*, which being exposed to the Day in an open Field or Street, are lighted as it were in an Instant; after which, if they are carried into a dark Place, they will appear like lighted Coals, without any sensible Heat, and you may extinguish them by little and little; but if you let in the Light, they will burn again: And thus they will last for two or three Years together, according as they are more or less frequently exposed to the Light. And when these Stones have lost their Virtue, they may be restored again, by observing the same Circumstances as before, but their Brightness will be much less. The Crust reduced into Powder is likewise finer and more illuminating, when exposed to the Air, than the Stones. They fill little Bottles of fine Crystal with it closely stoppt, which they keep to give Light when they please; for they are not obliged to expose it to the Air, as they do the Stones, the Crystal not giving any Obstruction to the Light from the Powder.

One must not imagine that any of the several Circum-

Circumstances that I have shewn for the Calcination of the *Bolognian-stone* are useles; for they are so necessary, that if they be not all exactly observed, the Operation is lost, and the Stone will give no Light. This Stone acquires, by Calcination, a sulphureous Smell, like melted *Orpiment*; and when it is boiled with Lime and Water, it yields likewise a little *Arsenical Salt*.

The Reason why it appears light, proceeds from the Fire mixing with the Sulphur in its Motion, which raises to the Superficies an Infinity of Particles that are so subtil and delicate as to take Fire upon Light, or the Motion of the Air. But those who desire to be more fully informed in this Matter, may read what I have said in my Treatise of *Chymistry*, where I have spoken not only of this kind of *Phosphorus*, but of several others; and have likewise given you the Figure of a Furnace that is most convenient and proper for calcining this Stone, which is a *Depilatory*; and being powdered and mixed with Water to the Consistence of a Paste, may be applied to any Part of the Skin where there is Hair to be taken off. It is called *Phosphorus*, or *Lucifer*, from bringing of Light; and *Crysolapis*, from casting a Light of a golden Colour,

[The *Bolognian-stone* is the *Lapis Bononiensis*, *De Laet*. 206. *Charlt. Foss.* 20. *Lapis Illuminabilis*, *Aldr. Mus. Met.* 688. *Phosphorus Kircheri quibusdam Fosforo o Pictra lucida de Bologna*, *Boet. Obs. Nat.* 224. The making the *Phosphorus* of it is a very nice Thing, and very few have succeeded in attempting it. It is a violent and dangerous Emetick if taken inwardly, and externally a Caustick.]

18. Of the Pumice-stone.

Pemet. **T**HE *Pumice-stones*, which the *Latins* call *Pumex*, are Stones of various Colours, Shapes, and Weight, being white, greyish, light, heavy, big, little, round, and flat. They are valued more or less according to the Occasion they are wanted for; for some esteem the white, others the grey, some the light, and some the heavy: Notwithstanding which, I must tell you, that the largest and lightest are most set by, especially for those who make Parchment, and Stone-cutters, who consume abundance; but the small are scarce used, but by the Pewterers, who reduce them into Powder. As to the flat *Pumice-stones*, they are used by the Curriers: In a word, the *Pumice-stones* are of such Use that we have scarce any Commodity whereof there is a greater Consumption, there being such abundance of Workmen that use them. As to Physick, the little Use

made of them in it is not worth speaking of, save only that after Calcination and powdering, it makes a Dentifrice for the cleaning of the Teeth.

As for the Nature and Constitution of this Stone, I have not yet been able to come to the Knowledge thereof; wherefore I shall rest satisfied with what Authors say of it, namely, that it is a Stone thrown out of Mount *Vesuvius*, or Mount *Ætna*, and by the Violence of the Winds carried into the Sea, where it is found swimming on the Surface, from whence it is taken. Others say they are the Stones of Mountains that have been burnt by subterranean Fires. However, it is certain, that the *Pumice-stone* is a calcined Stone, because it is light and porous, or full of Holes, and that it has been in the Sea, or is of a salt Nature, forasmuch as all the *Pumice-stones* we sell are of a salt and brackish Taste, and full as it were of little Needles.

Pumex, or the *Pumice Stone*, is a Stone or Earth that has been calcined *Lemery*. by subterranean Fires, thrown out by Eruptions of the Volcano's, and by the Force of Winds carried into the Sea, where it is found floating. There are several kinds of it, the large, small, round, flat, light, heavy, grey, white, &c. the most valued are the biggest, lightest, and the cleanest; they ought to be porous, spongy, of a salt, fenny, or marshy Taste, full of small Needles. They are found likewise in *Sicily*, near Mount *Vesuvius*, from whence they come; and in *Germany*, about *Conflans*, the *Moselle*, and the *Rhine*; they are alkaline, deterfive, drying, used for old Ulcers, sore Eyes, and to clean Teeth.

[The *Pumice* is the *Lapis Pumex dictus*, *Cup. Hort. Cath.* 2. 53. *Pumex*, *Kentm* 37. *Boet.* 400. *Scyrus Lapis*, *Aldr. Mus. Met.* 696. It is found among the Sulphur about *Ætna*, *Vesuvius*, and other burning Mountains; as also in *Germany*, and other Places. It is often mixed with the *Os Sepiæ* in Tooth Powders; but has little other Use in Physick.]

19. Of the Aëtites, or Eagle-stone.

WHAT we call the *Eagle-stones*, are *Pemet.* certain Stones that are hollow in the middle, and contain in them a stony Nut or Kernel, that makes a Noise when we shake them. We commonly find four sorts of them, that are indifferently called in *Latin*, *Lapis Aëtites*, but the Kernel *Callimus*. The first sort is brown, oval, usually the Length of two or three Inches, and half a one broad, rough or knotty, and that takes a good Polish: The Second is something less than the other, and seems to partake much of Iron, for

it

it is covered with an Ocre like the Iron Marcasites. The third sort is rough and uneven, as if it was composed of Fragments of little shining Flints of different Sizes, whereof some are brown, and others of a russet Colour, and some as it were transparent; and all these Flints are strongly knit together by a natural Cement, and most commonly nothing is found within it but some Grains of Sand. The fourth Kind is of an Ash-colour, and contains within it white Clay or Marle. This sort comes from *Germany*: The First and Second are found in the Bogs of *Cape St. Vincent* in *Portugal*, and in the Mountains near *Trevoûx*, in the Principality of *Dombes*. It is now no longer believed that they are found in the Eagle's Nest.

It were to be wished that the Virtues attributed to the *Eagle-stone* were as certain as they are considerable; Authors affirming that it facilitates the Birth, if tied to the Thigh of a Woman in Labour, and that it hinders Miscarriages if tied to the Arm; they believe that reduced to Powder, and mixed in a *Cerate*, it lessens the *Paroxysms*, or Fits of the Epilepsy, if applied to the Head: It is also said, that the Marle or Clay that is found in the Hollow is sudorifick, and will stop the Flux of the Belly.

What I have said in the Chapter of the *Eagle* about these Stones, was in Concurrence with the common Opinion; and because I was not absolutely certain of the true History of them, but the Account here given of them is the more rational, and what is generally believed now.

Ætites Lapis, or the *Eagle-stone*, is a *Lemery*.

Stone commonly round or oval, of the Bigness of a Walnut, and sometimes of a small Pullet's Egg, of a greyish or dark Colour, hollow in the middle, wherein is contained a sort of stony Kernel, that rattles in the Stone when you shake it. There are four Kinds [according to *Pomet's* Description] all which have great Virtues assigned them, which are altogether imaginary, Experience not confirming them with any Pretence of Certainty: It is astringent, and proper to stop Loosenesses and Hemorrhages, taken inwardly; the Kernel, which is softer than the Stone, is more advantageous for all the same Purposes: They are called *Ætites*, that signifies *Aquiline*, or of the *Eagle*, because it was believed that the *Eagles* furnished their Nests with these Stones to preserve their Young.

[The *Eagle-stone* is the *Ætites*, seu *Aquilinus Lapis*, *Bect.* 375. *Worm.* 77. *Charlt. Foss.* 31. They are of various Bignesses and Colours, but generally of an oval Form. They are found in different Places; but those from the *Levant* are most esteemed. The Virtues ascribed to them are

wholly imaginary, and the Stories about them ridiculous.]

20. Of the Toad-stone.

THE *Toad-stone*, called in *Latin*, *Bufonites*, and *Batrachites* in *Greek*, is a Stone found in the Mountains, or the Plains. It has been believed that it was bred in the Head of an old *Toad*, whence it was voided by the Mouth of that Creature when put upon red Cloth: But *Boëtius*, and those who have made exact Enquiries after it, affirm that it is a Stone formed in the Earth. There are commonly two sorts, to wit, the round and the long: The round *Toad-stone* is of the Shape of a small Cap, round in the Circumference, hollow below, convex above, and very smooth, about half an Inch broad at the bottom; some of them are of a deep grey inclining to blue; and there are others of a reddish Colour; but both sorts are usually of a much lighter Colour at their bottom. The long *Toad-stone* is most frequently of an Inch long, and above four or five Lines thick, hollowed like a Trough on one Side, and of a convex Figure on the other: Some of those are of a deeper, and some of a lighter Grey, marked with some reddish Spots, and smooth as the round: They set them, especially the round sort, in Rings; but that is more for Ornament than any Virtue in them, for they are very uncertain in their Effects, especially in their allaying, as is pretended, the Inflammation occasioned by the Sting of Bees, or other Insects. It is false that it changes its Colour, and sweats when it approaches a Cup wherein there is Poison. Though *Boëtius* and others affirm, that the *Toad-stone* is found in the Ground, nevertheless I shall not contest or dispute, but that it may also be bred in the Head of old *Toads*, though it is certain what we now sell comes not from these Animals, but is found in the Earth, as has been observed. This Description of the *Toad-stone*, and that of the *Eagle-stone*, were given me by Mr. *Tournefort*, who is a Person on whom we may depend.

Bufonites, *Chelonites*, *Batrachites*, is a kind of precious Stone, whereof there *Lemery*. are two Kinds, one round, and the other long. The first is round in its Circumference, hollow on one Side, and convex on the other, in Form of little Cap or Bonnet, about half an Inch broad at the Basis, very smooth, sometimes grey, brown, black, green, and of various Colours. The second sort is sometimes more than an Inch long, and above four or five Lines thick [according to *Pomet's* Description.] The Size of these Stones are sufficient to undeceive those who believe that they

they are taken from the Heads of Toads; they are found in the Mountains, and the Plains where they are produced.

Some pretend, that being powdered and taken inwardly, they are capable of resisting the Plague and other malignant Diseases; that being applied to the stinging or bitings of venomous Beasts, they draw out the Poison. Some hang them about their Neck for *Quartan Fevers*; but all these Virtues are imaginary, for the *Toad-stone* has nothing in it but an alkaline Quality proper to absorb Acids, and to stop Looseness, taken from a Scruple to half a Drachm; but it is not in Use.

[The *Toad-stone* is *Bufonites Lapis*, *Ind. Med.* 23. *Bufonites Majusculus Atro rubens instar Capsulae Glandis Quercinae*, *Act. Reg. Soc.* 200. *Luyd. Lithop. Brit.* 20. *Bufonius*, *Mer. Pin.* 210. They have been variously guessed at in regard to their Origin; but are in truth the *Dentes Molares* of the Sea Wolf. *Lupus Marinus*, *Schonf. Isth.* 45. *Charlt. Pis.* 31. *Lupus Marinus nostras & Schonfeldii Raii Isth.* 130. The Virtues ascribed to them seem altogether imaginary.]

21. Of the Lapis Amiantus.

Pomet. THE *Lapis Amiantus* is a Stone of a greenish Black without and within, pretty heavy, that being broken is almost like *Plumous Alum*, in that it rises in Threads of a whitish Green, or rather of a Horn Colour. This Stone is incombustible, and the Antients were not much deceived when they said the *Lapis Amiantus* and the *Plumous Alum* were the same Thing: There is notwithstanding some Difference, in that the *Plumous Alum* arises in long, and this in short Threads; besides, the Extremities of the *Plumous Alum* are not of a Colour with those of the *Lapis Amiantus*. This Stone is found in *Turkey*, for all that we sell comes from *Constantinople*; as to the Choice of it, or its Use, I know nothing, save that an incombustible Cloth is made of it, which is a very great Curiosity.

Amiantus, *sive Albeston*, *sive Albestes Lemery.* *Lapis*, is a Stone of a mineral Substance, or a kind of Talck that has a near Resemblance to *Plumous Alum*, several People confound one with the other, believing them to be the same Thing. It is found in two different Forms; for the one is in Filaments or Strings, like those of *Plumous Alum*, but much longer; the other is in a brown or blackish hard Stone, but that will spread under the Hammer. The Antients spun *Amiantus* and made incombustible Linen of it, which, amongst other Uses, served them to wrap their dead Bodies in when they burnt them to pre-

serve their Ashes: The Corps burnt with the Linen remained entire. This Stone is found in the Quarries near the *Pyrenes*. *Amiantus* is used in some Remedies; they believe it resists Poison, cures the Itch, and is deterfive.

[This is the *Amiantus*, *Boet.* 382. *Gesn. De Lap.* f. 6. *Amianthus*, *sive Asbestos*, *Ind. Med.* 8. It is of many Figures and Colours; some Pieces of it so much resembling the *Alumen Plumosum*, that by the Ignorance of those who gathered them, they have been sold to Druggists, &c. as such; though the Taste alone is sufficient to shew the Difference.

It is found in many Places; and among others both in *Scotland* and *Wales*.

It stands the Fire unhurt; which the *Alumen Plumosum* does not, and is not at all dissoluble in Water as that is.

It is of no Use in Medicine; there have indeed been many Virtues attributed to it, but they seem altogether imaginary.]

22. Of Cobalt.

COBALTUM, or Kobaltum, is a reddish hard Stone, that is heavy, and in Grains of the Size of our Peas, that stick several of them together upon a kind of Spar or Marcasite, like Antimony. This *Cobalt* is usually found in the Silver Mines, and is a Plague to the Workmen, being a dangerous Poison: For if by Chance it fall into the Water, and that the Miners be obliged to go into that Water, they are sure of having their Legs all ulcerated. This *Cobalt* is much different from that of some Authors, who have thought it to be *Lapis Calaminaris*; but they are grossly mistaken, since it is easy to see the Difference. As to its Uses, they are unknown to me, and its Scarceness makes that there is little Demand for it.

Cobaltum, *sive Kobaltum*, is a sort of Marcasite, or hard, heavy, reddish granulated Stone; many of which are collected together upon a mineral Body like Antimony. This Stone is composed of a kind of natural *Cadmy* that is found in the Silver Mines. It is a strong violent Poison, yielding a burning arsenical Salt, a Sulphur, and an Earth composed of some metallick Parts. It is caustick, and being applied externally, makes an Escar upon the Flesh, and eats off Excrecences.

[*Cobalt* is the *Cadmia Metallica*, *Werm.* 128. *Charlt. Foss.* 51. *Aldr. Mus. Met.* 256. *Matth.* 1338. *Cadmia Metallaris aliis Cobaltum Metallicis*, *Schw.* 370. *Cadmia fossilis ex qua preparatur Zaffera*, *Wood. Attempt.* ii. P. 1. p. 50. It is a ponderous, hard, fossil Substance, not unlike *Antimony*, or some

some kinds of the *Pyrites*, emitting a strong sulphureous Smell when burnt, often containing Copper, and sometimes Silver. It is dug out of Mines in *Saxony* and *Bohemia*, and in *England*, in *Mendip Hills*, but there not very common.

All the Kinds of *Arsenick*, as also *Zaffera*, and the *Encaustum Cæruleum* are obtained from it, as already mentioned in their respective Places.]

23. Of *Osteocolla*, or the Bone-Binder.

Pomet. **T**HE *Osteocolla*, or *Bone-Binder*, is a sandy Stone, and porous like a Bone, whereof there are two Kinds; the one heavy, gravelly, uneven, and pretty round; the other light and less ragged. The *Osteocolla* is found in several Parts of *Germany*, where they call it *Bcnbru*, but chiefly near *Spires*, *Hcibelberg*, and *D'Armstadt*. They pretend that this Stone has the Power and Faculty of setting a broken Bone when taken inwardly, as well as when applied to the Fracture.

Besides all these sorts of Stones already described, we sell several other Kinds, such as the *Asius Lapis*, or *Sarcophagus*, the *Serpentine* and *Blood-Stone*, which is a sort of *Marble* full of little red Spots, from whence it takes the Name of *Blood-Stone*; as also because it is pretended that it stops Blood; the *Star-Stone*, *Rock-Crystal*, *Alabaster*, the *Small Pox-Stone*, the *Astroites*, *Ostracites*, *Cross-Stone*, *Cornu Ammonis*, *Glossopetra*, and the *Rock* and *Madagascar Crystals*, and many

others, whereof several Authors have treated at large.

Osteocolla, *Ostiocolla*, *Osteites*, *Stelechites*, *Morochtus*, *Holosteus*, *Osteolithus*, *Lemery*. *Lapis sabulosus*, *Lapis ossifragus*, or the *Bone-Binding Stone*, is a sandy hollow Stone, of an Ash or whitish Colour, having the Shape of a Bone, of different Sizes. Some are met with as big as one's Arm. We have two sorts of them; one round, uneven, or rough, sandy, and heavy, the other smoother and lighter; it sticks to the Tongue, like *Pumice-Stone*. Both kinds are found in several Parts of *Germany*, as the *Palatinate* and *Saxony*, where they grow in sandy Places. It is used to agglutinate and restore in a little Time broken Bones, being applied upon the Part, and taken inwardly at the same Time; Dose from half a Scruple to two Scruples. It is called *Osteocolla* from *Osteon* and *Colla*, which is as much as to say Bone-Glue.

[This is the *Osteocolla*, *Worm*. 53. *Charlt. Foss.* 32. *Osteocollus Crustaceus*, *Gesn. De Rar. Foss.* 30. *Ossifragus Lapis*, *Boet.* 416. It is a Spar of a middle Consistence, between Earth and Stone, and is found in many Places. Beside the Virtues which its Name expresses, it is esteemed a good Medicine in Fluxes of all kinds, particularly the *Fluxus Albus*, but is seldom used. As to the other Stones, mentioned by our Authors, as they are never kept in the Shops, nor used in Medicine, I judge it will be but tedious to enter into a more particular History of them here.]



BOOK VI.

OF EARTHS.

P R E F A C E.

In this Book are contained not only the Earths that are of Use in Medicine, but likewise those which are serviceable to Painters; in a word, all those Fossils that are soft and apt to crumble, and for this Reason have not been ranked among the Stones. I comprehend in this Book also whatever is made from Earths, and makes a Part of our Business. I have put into the Number of the Earths the Catecu, or Cachou, not because of its Likeness to an Earth, but that most People will have it to be one, according to its Name, as will appear in the following Chapter.

I. Of Cachou, Cashew, or Japan Earth.

Pomet. **C**ACHOU, according to Mr. Caen, Doctor of Physick, of the Faculty of Paris, suitably to what was communicated to him by one of his Friends, is an Earth that is found in the *Levant*, where it is called *Masquiqui*; it is usually met withal upon the highest Mountains where the Cedars grow, under the Roots of which this Earth is found, which of itself is very hard, and in a Lump. To lose nothing of this Earth, the Natives, called *Algonquains*, gather it up, Sand and all together, and wet it with River Water, and make it into a Paste, drying it in the Sun to the Hardness we see it of. The Natives always carry it about them, and use it for the Pain of the Stomach: They also apply it outwardly, like an Ointment, upon the Region of the Stomach.

Though this Description of *Cachou* appears not very conformable to Truth, because there is no Probability of its being an Earth; yet as the Person who gave this Description to Mr. Caen assured him that it was so, and forasmuch as it is called in *Latin*, *Terra Japonica*, I was obliged to rank it in the Class of Earths, and leave it to those to determine what it is, who understood more of it than I do: All I shall say is, that you ought to chuse *Cachou* of a tawny red without, and of a clear red within; the brightest and least burnt that can be.

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Cachou is a very bitter Drug, and of an unpleasant Taste when first taken in the Mouth: It is usual to reduce it into a fine Powder, and to mix it with Ambergrise; which, with the Mucilage of *Gum Tragacanth*, is made up into a Paste, and formed into little Pellets, in Colour and Figure having the Resemblance of Mouse's Dung; and the smaller these Troches are made, the more valuable are they.

The Use of *Cachou*, whole or prepared, is to strengthen the Stomach, and to make the Breath sweet; and, in short, it is one of the best Drugs we have, and yet at this time the least used, since the great Use of Tea and Coffee; though *Cachou* is of much greater Virtues than either of them.

As *Cachou* is very unpleasant to the Palate, especially when first put into the Mouth, therefore some People, besides the Ambergrise, mix Sugar with it.

Other Accounts there are which make this Drug an inspissated Juice of two vegetable Substances, the *Areca* Nut, and the Bark of an *Indian* Tree, called by the Natives *Catecu*, with the Addition of Liquorice Root and Lime Water; and others, the simple Juice of a Tree, thickened with other Vegetables in Powder; others, that *Calamus aromaticus* and other Drugs are made Ingredients in it.

The Differences in Colour which we observe in this Drug may arise, either from its being made of different Species of the *Areca*, or from its having in it greater or lesser Proportion in it.

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It was unknown in *Europe* till *Garzies ab Orta* wrote of it; and, in all probability, when it gets more into Use will prove a very fine Medicine.]

Catechu, sive Terra Japonica, is a sort *Lemery*. of dried Paste, hard, a little gummy, reddish, having the Form and almost the Hardness of a Stone; of a bitter and austere Taste at the beginning, but leaving afterwards a soft and agreeable Impression in the Mouth. There are two sorts of it; the first and most common is compact, heavy, of a reddish brown Colour, streaked with little whitish Rays; the second is more porous, less weighty, and paler than the first. We are not sufficiently informed concerning the Nature of *Cachou*, some saying it is a Paste prepared by the Japanners with the Extract of *Areca*, *Calamus Aromaticus*, *Liquorice*, &c. mixed and hardened together over the Fire: Others pretend, that it is made with the Juices of *Areca*, and the green Bark of a thorny Tree of *Japan*, called *Catechu*, and thickened together by Heat: Others, as some Moderns maintain, that it is an Earth from the *Levant*, called *Masquiqui*, [as described by *Pomet*:] But, after all, *Cachou* does not appear to the Taste to be any thing of an Earth, but rather a thick Juice; besides, there is drawn from it, by chymical *Analysis*, a great deal of Oil and essential Salt, like what is drawn from Plants. It is good to strengthen the Brain, Lungs, Stomach; against Catarrhs, and to correct a stinking Breath.

[The *Japan Earth*, as it is called, is nothing more than the inspissated Juice of the *Areca* Nut, described in its proper Place, either simple, or mixed with other vegetable Juices or Decoctions; for we have two kinds of it common in the Shops.

The simple Juice we have from *Pegu*; it is cleaner than the other, of a more astringent Taste, and melts upon the Tongue; it is commonly in smaller Lumps, and composed of a great number of thin Strata lying one close on another, blackish on the outside, and of a paler mixed Colour within.

The Mixed is in large Lumps like Clods of Earth, it is brought from many different Parts of the *East-Indies*; and it is evident to the Taste, that the several Parcels of it from different Places, contain different Juices or Decoctions mixed with the *Areca* Juice in a greater or lesser Proportion.

The greatest Quantity we have of this is from *Malabar*, in which it is easy to discover two or three different Tastes; and a careful Dissolver may often discover two or three different Substances in it, for the *Lacule* it deposits are not wholly of the vegetable kind. I have often found, in the Paper I have filtered, a Solution of this kind of *Terra Japonica* through a Matter resembling burnt Hart-

horn, which was probably the Calx of calcined Shells, which in some Places is used in making it. The different Tastes in the several Kinds of the mixed *Terra Japonica*, have led People of fertile Imaginations to guess different vegetable Substances as the Ingredients; among others, *Calamus Aromaticus*, *Liquorice*, and the rest named by our Authors; but, the Truth is, we are wholly ignorant what the Mixture consists of; and, in all probability, it may be of Drugs, of which not even the Names are known with us: It were, however, to be wished Apothecaries would only use the Simple, as I can, upon long Experience, affirm it to be more certain in its Effects; and, as in the other, we never are sure what we give, different Parcels of it containing different Ingredients.]

2. Of Sealed Earth.

Terra Sigillata, or *Sealed Earth*, is a *Pomet*. kind of white *Bole*, sometimes a little reddish, that is moistened with Water, and afterwards formed into little Cakes, roundish, of the bigness of one's Thumb, upon which are stamped several Characters. The Variety of Figures, Colours, and different Seals that are found upon the *Terra Sigillata*, makes me think that every one makes it up according to his Fancy; and that it is nothing but a fat astringent Earth, more or less coloured, reduced into such Cakes as are brought us. I shall not stop here to relate all the fabulous or true Stories which the Antients have told concerning the Place whence this Earth comes, and the Ceremonies used when it is gathered, nor how the *Grand Signior* signs it with his own Seal, &c. but I shall tell you, that the Earth that is most used and esteemed, is that which is in little reddish Cakes, the least sandy or gravelly, and the most astringent that you can get.

It is much used in Medicine, because of its astringent Quality: It is also an Ingredient in the *Venice Treacle*, and needs no other Preparation than to be clean and have the above described Qualifications.

As to the Earth of *Lennos*, it is the same with the Sealed Earth, but in its natural State, without any Impression upon it.

Terra Sigillata, Terra Lemnia, Sealed, or Lemnian Earth, is a kind of *Bole*, *Lemery*. or fatty, clayey Earth, that is dry, soft, and friable; sometimes yellowish, whitish, or reddish; insipid and astringent to the Taste. They bring it sometimes into the Isle of *Lemnos*, but it comes at present from *Constantinople*, *Germany*, *Bleis*, and several other Parts. It comes ordinary formed into little round Cakes about the thickness of one's Thumb,

Thumb, roundish on one Side, and flat on the other, by a Signet engraved with some Arms or certain Devices that the Prince of the Country causes to be put upon it ; and this is the Reason why it is called *Sealed Earth*. That of the Ancients was yellow, and made into Cakes much smaller than these at present are ; and had engraved upon them the Representation of a Goat.

Chuse your sealed Earth that is soft to the Touch, clayey, apt to crumble, and of a whitish red Colour, that will cleave to the Tongue. They tinge or colour it sometime with Turmeric, or some other Drug, to make it come up to the Colour of the Ancients, which was the true *Lemnian Earth*, and was taken from a Hill where no Plant grew. The *Turks*, who are the present Masters of it, mix this with other Earths of the same Nature ; and having kneaded them together with Water, make them up into little round Cakes, which they seal with the *Grand Signior's* Signet to make it pay Duty. This Earth is a good Antidote against Poison, proper for Fluxes, Hemorrhages, Gonorrhœa, Whites, and Vomiting. Dose from half a Scruple to two Scruples. It is outwardly used to stop Blood, dry up Wounds, and strengthen the Joints.

[The true *Lemnian Earth* is yellowish with Specks of brown, this is sometimes to be met with unsealed, and in its natural State ; the sealed used in the Shops is of two kinds, the white and the red, the red is most esteemed, and is the *Terra Lemnia rubra Worm*. 10. *Charlt. Foss.* 5. *Terra sigillata Turcica rubra. Mont. Ex.* 14. It is a fat viscid slippery Clay of a pale red Colour, it is brought to us in Cakes of about three Drachms weight, sealed, and is dug in the Island of *Lemnos*, and many Places in the *Turkish Dominions*.

The white is the *Terra Lemnia sigillita Alba Worm*. 9. *Charlt. Foss.* 5. *Terra sigillata Turcica Alba. Mont. Exot.* 14. It is less fat and of a more astringent Taste than the other, and is dug only in the Island of *Lemnos* ; but both this and the other are often counterfeited. Beside these there is also another kind.

Great Virtues were always ascribed to these Earths, and a Number of idle Ceremonies used in the digging them. At present it is a matter of some Ceremony ; for there is but one Day in the Year in which the Pits are opened for the digging them, and the *Greek Priests* assist at the Ceremony, and rehearse certain Forms of Prayer.

They are good Medicines in Dysenteries, Hæmorrhages, &c. if genuine, but are so seldom found so, that they are grown almost entirely out of Use. There are beside these a Multitude of

other *Sealed Earths* common in the Shops, but they are most of them Counterfeits, made up of different Mixtures of Tobacco-Pipe Clay, and red or in yellow Oker.]

3. Of Fine Bole, or Bole Armoniack.

IF we have several Sorts of sealed Earths, *Pomet.* we have not less of *Boles*, whereof the most esteemed is that which has its Name from the *Levant*, or *Armenia*, either because it formerly was brought from those Parts, or that those who deal in it may make it sell the better ; but as I have never seen any of that, and what we now sell is found in several Parts of *France*, I must inform you the best is that we have from about *Blois* and *Saumur*, or from *Bourgogne*, and which is of various Colours, as grey, red, and yellow. The yellow is the most valued, because it passes the readiest for the true *Bole* of the *Levant*, and because it fits the *Gilders* best.

As these *Boles* are the dearest, because of the Charge of transporting them to *Paris* from *Blois* and *Saumur*, we prefer that of *Baville* and other Places about *Paris*, because the Peasants bring it us at a cheaper Rate than we can buy the other. All these kinds of *Bole* to be good must be tender, friable, soft in handling, not sandy, shining, and astringent to the Taste, that is to say, such as, when you put them to the Tongue or Lips, you cannot easily get them off. They are very drying and astringent, good against Fluxes and Gleets, thicken thin Humours, resist Putrefaction, and expel poisonous Bodies. They are likewise used in spitting of Blood, bleeding Wounds ; and also to consolidate broken Bones, and strengthen weak Limbs.

Bolus, or *Bole*, is a soft, brittle, reddish, or yellow Earth, which is brought *Lemery.* us in Pieces of different Shapes and Sizes.

The finest comes from the *Levant* and *Armenia*, called *Bolus Orientalis*, seu *Bolus Armena* ; but all the *Bole* we have, which is in use amongst us at present, is brought from several Parts of *France*, and the best is about *Blois* or *Saumur*. As there is found in the Quarries or Pits a great deal of coarse or gravelly *Bole*, they wash it to free it from the Gravel, then make it into a hard Paste, which they form into square Sticks about a Finger long, which is called *Bole in the Stick*, and which is used externally. *Bole* is astringent and desiccative, proper to stop Looseness, Dysentery, Spitting of Blood, to sweeten the Acids, being taken inwardly. There is also a great deal used externally to stop Blood, prevent Fluxion, and strengthen and con-

solidate. That which is called white *Bole* is an astringent Marle, but not so efficacious as the red *Bole*.

[There are many different kinds of *Bole* mentioned by different Authors, but the two in principal use at present are, the *Bole Armenick*, and *Bole of Blois*. The first is the *Bolus Armena orientalis* Mont. Ex. 13. *Bolus Orientalis* Charlt. Foss. 5. *Bolus seu terra Armenia* Aldr. Mus. Met. 269. *Bolus Armenius verus* Kentm. 7. It is to be observed that the true *Bole Armenick* is almost wholly unknown in the Shops. It is brought from *Turky*, and is of a Saffron Colour. What we sell under the Name of *Bole Armoniack*, is a kind of pale red Oker from *Spain* and *Normandy*, and what is much more common than that in the Shops of our petty Druggists is a Mixture of *English* red Oker and Pipe-makers Clay, formed into Cakes and dried.

The *Bole of Blois* is the *Bolus Blefensis* Ind. Med. 21. It is a fine Earth of a yellowish red Colour in thin beautiful Strata, but is very seldom found genuine in the Shops, what is commonly sold by our Druggists for it being only a red Oker and Pipe-makers Clay, like the common *Bole Armenick*, only with less Proportion of the Oker. The *Bole* mentioned by *Galen* was the same with that of the later *Greek* and *Arabian* Authors, his being described to be pale, and their's of a Saffron Colour.

The other *Boles* mentioned by Authors are 1. the *Bolus Bohemica*, the German *Bole*. 2. *Bolus Gallica vulgaris*, red French *Bole*. 3. *Bolus Toccaviensis*, the *Transylvania Bole*. 4. *Rubrica Synopica*, Earth of *Sinope*. *Bolus Armena lutca*, yellow *Armenian Bole*. 6. *Bolus candidus*, white *Bole*. And 7. *Bolus Armena Alba*, white *Armenian Earth*. But none of these are now ever prescribed, or kept in the Shops.]

Of Oker.

Pomet. THE yellow and red Oker is one and the same Thing, for the natural Colour is yellow, and it is turned red by Means of a reverberating Furnace, in which they put it, to make it red by the Force of the Fire: The best Mines of Oker in *France*, are in *Berry*; and among the rest, one is at a Place called *St. George*, upon the Side of the River *D Ucher*, two Leagues from the City *Vierzou* in *Berry*, where they dig it out of the Earth, as they do Pit-Coal. This Oker is found 150, or 200 Feet deep in the Earth, from four to eight Inches thick; they find under this Oker a white Sand, like that of *Calais*, and above the Oker a yellow Clay good for nothing.

There comes likewise a yellow Oker from *England*, which is browner than that of *France*, but not so good, because it is naturally drier; it comes from a stony Earth which they are forced to grind in a Mill; whereas that of *Berry* is natural, fatter, and works better in Oil; so that the *Dutch* cannot use the *English Oker*, but when they mix it with an equal Share of that which comes from *Berry*.

Both Sorts are used by the Painters; but that which is most set by, is that which is dry, soft, friable, of the highest Colour, and least gravelly.

There comes beside a Red Oker from *England*, which we commonly call *Brown Red*; this is used by the Painters; but that which is of a much deeper Colour is called *Putty*, and they employ it in polishing of Glafs.

Ochra, in *English Oker*, is a Mass of Earth that is dry, fat, will crumble, and *Lemery*. is soft to the Touch, of a yellow or Gold Colour, that is taken from some deep Pits in *Berry*. They calcine it in the Fire, 'till it gains a red Colour, and then it is called *Red Oker*; both sorts are used by the Painters; they are resolute, drying, astringent, being externally applied.

[Oker is a kind of Earth found in *England*, and many other Places. It is of two principal kinds, the yellow and the red, and both natural, and dug out of the Earth in great Plenty. Tho' it is also true, as common Experience shews, that the yellow will become red in burning. The natural *Red Oker*, Ruddle, or Marking-stone, is the *Rubrica fabrilis* Merr. Rin. 218. *Rubrica* Charlt. Foss. 2. Worm. 4. It is weighty, of a deep red, and of an astringent Taste, and is dug in *Herefordshire*, *Hampshire*, and *Lancashire*. It is drying and astringent, but is seldom prescribed, tho' very frequently used as a part of the common *Bole* as mentioned in the last Chapter.

[The yellow is the *Ochra* Aldr. Mus. Met. 255. *Ochra Fossilis seu nativa crocei coloris* Dougl. Ind. 64. *Ochra nativa seu sil. Goslariensis* Kentm. 8. It is of a strong yellow Colour, and astringent Taste, but is never used in Medicine.]

5. Of Terre Verte.

WE sell two sorts of *Green Earth*, to wit, that of *Verona*, which is *Pomet*. brought from about *Verona* in *Italy*, whence it takes its Name, and the common *Green*.

The Earth of *Verona* ought to be stony, and as green as may be, and take care that it be not inlaid with Veins of Earth.

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The common Green ought also to be of the greenest, and as near resembling that of *Verona* as you can get.

Terra Viridis, in *French*, *Terre Verte*, *Lemery*. is a dry Earth, of a green Colour, which is brought from *Verona* in *Italy*, and is for the Painters Use.

[This is an Earthy Substance, impregnated with Copper, to which it owes its Colour. It is found in many Countries, particularly in *England*, about *Godsculp* in *Cumberland*, adhering to the Sides of the great Copper Vein there, being brought by the Water which is perpetually trickling down the Sides.

It is used by the Painters, but not in Medicine. The Sort commonly used by them is brought from the Pope's Dominions, and is found in Mountains not far from *Rome*; it is somewhat unctuous, and adheres slightly to the Tongue. It needs no farther Preparation for their Use than being powdered and ground with Oil, and makes the most true and lasting Green of any simple Body they use.]

6. Of Cogn Earth.

Pomet. **C**ogn Earth is an Earth altogether like that of *Umber*, excepting only that it is browner: This is of some Use to the Painters. You must chuse such as is tender, easy to crumble, the cleanest, with as little Mixture of Dirt as possible.

7. Of Umber.

UMBER, so called because of its being used in drawing Shades, is brought to us from *Aegypt*, and other Places of the *Levant*, in Lumps of different Bigness.

In the Choice of this Earth, you ought to take that which is soft, in large Pieces of a brown Colour inclining to the red, for this is better than the grey.

Its Use is for the Painters, and before it is ground it is usual to burn it, as well for Painting in Oil as for the Glovers, which makes it become more reddish; the Fume of it ought to be avoided, as being stinking and offensive.

8. Of Tripoly.

Pomet. **T**HE Tripoly is of two kinds in *France*; the one they bring from *Poligny* near *Renne*, in the lower *Bretagne*; the other from a Place called *Menna* near *Rion* in *Auvergne*. That of *Bretagne* is most esteemed, and the best, being more proper for *Lapidaries*, *Goldsmiths*, *Braziers*,

and all other Workmen: It is taken from a Mountain at twenty or thirty Feet of Depth, and is found in Veins or Beds of about a Foot Thickness: They carry it to *Redon*, where it is shipped and transported to *Nants*.

That of *Auvergne* is not so valuable, being not at all fit for the Use of Jewellers, Goldsmiths, or Braziers, because it has not Substance; it rises into thin Leaves like Paper, when it is dry. It is only used for scouring Household Stuff, and is found almost in the very outer Surface of the Earth.

'Tis said that *Tripoly* is a Stone that becomes light by Means of certain Veins of sulphurous Earth that have burnt under the *Tripoly*, and which gives it the Quality of whitening, polishing, and brightening the Copper.

There are also Mines of *Tripoly* in *Italy*, and other Places; but as this Commodity is of little Value and Consumption, it is not much sought after; besides which we have it in *France*, and there is no Occasion to bring it from other Parts.

Alana, in *French* *Tripoly*, is a light white Stone, tending a little to the *Lemery*. red, which they take from several Mines of *Bretagne*, *Auvergne*, and *Italy*. 'Tis believed that the Lightness of this Stone proceeds from its being calcined by the subterranean Fires. We have two sorts in *France*; the first, and the best is that from a Mountain near *Renne* in *Bretagne*. It is found laid in Beds of about a Foot thick, and is used by the *Lapidaries*, &c. to whiten and polish their Works. The second Sort is brought from *Auvergne*; this divides itself into Flakes or Leaves, and is of no Use to the *Lapidaries* or *Braziers*, but serves to scour Pots and Kettles, and other Utensils belonging to the Kitchen: It is deterfive and drying applied outwardly, but is not used in Medicine.

[The Official *Tripoli* is the *Tripolis*, *Schrod*. 320. *Terra seu Gleba Alana*. *Call. Mus*. 131. It is an earthy Substance of an astringent Taste. It is of many Uses among Workmen in different Trades, but is never heard of in Medicine, tho' some have commended it as an Astringent.]

9. Of Indian Red.

THE Indian Red, or *Persian Earth*, *Pomet*. is what we improperly call *English Red*; it is a very dear Drug, especially such as is in little Pieces, moderately hard, and of a high Colour. This Red is used by none but the Shoemakers, who steep it in the White of an Egg to colour Shoe-Heels with.

We have besides these several other Sorts of Earths as they come from the Pits; as *Marle*, that some

some sell by the Name of *White Bole*, and many washed Earths; as *Rouën White*, that of *Seve* and *Port Neuill*; *Champagne Chalk*; there are also others which we know of, but sell none, as the *Smeſtis*, commonly called in *England*, *Fuller's Earth*, which is a fat, smooth, sticking Earth that is heavy, sometimes blackish. This is much used by the Clothiers in *England*; and because this Earth does almost the same Thing as Soap, the *Latins* call it *Terra Saponaria*, or *Soap Earth*. As also the *Mexican Earth*, a very white Earth, which the People of *Mexico* make use of to whiten with, and in Medicine like Ceruse; likewise it serves to polish Silver.

The *Marga*, which is a kind of white Stone very like *Champagne Chalk*. The *Lithomarga*, or *Stenomarga*, which is what we call *Stone Pith*, or *Mineral Agarick*, or *Moon Milk*; this Stone is found in the Chinks or Apertures of the Rocks in several Parts of *Germany*; and different Names have been given to this Stone; it is very white and crumbling, and this Whiteness comes from its being calcined by the Vapours which arise from Metals.

There are, besides, several other Sorts of Earths, as the *Etrurian Earth*, the *Samian Earth*, *Chio*, *Selinusian* and *Cimolian Earths*, and *Tobacco-pipe Clay*; with many others, whereof several Authors make mention.

As to the Preparation of Stones or Earths, that is done ordinarily two Ways, that is to say, by grinding on a Porphyry or Marble, in like Manner as Pearl, Hyacinth, Topazes, Emeralds, Sapphires, Corals, Loadstone, *Lapis Calamianis*, Tutty, and the like, are ground. The second grinding in a Mortar with Water, in order to get the fine Powder, as we do Litharge, Ceruse, and Minium. The first, after they have been levigated, are made into Cakes with Rose Water, and the others into Tablets with common Water.

Terra Persica, or *Indian Red*, is a Lemery. dry red Earth that is brought us in little

Stones that are of a moderate Hardness. The Shoe-makers use them to dye Shoe-Heels red; chuse the deepest coloured. *Terra Saponaria*, in French *Smeſtin*, or *Fuller's Earth*, is a kind of slippery glutinous Earth, that is heavy, of a yellow or blackish Colour, and does the same Thing as Soap, whence it was called *Scap Earth*, or the Earth the Fullers use to scour with. The *Terra Selinusia* is a greasy or clayey Earth, that is very like that of *Chio*; it is astringent and resolute, proper to take away Spots and Chops of the Skin, to soften Tumours of the Breast and Testi-

cles, and to resolve. The *Chio Earth* is a kind of sealed Earth, or a fatty, sticky, ash-coloured Earth, that is brought from *Chio*: it is astringent, and removes Spots, &c. *Terra Samia*, or *Samian Earth*, is what comes from the Isle of *Samos*, and is of two kinds; one is soft, white, and crumbling, that sticks to the Tongue when applied to it, and is very like *Sealed Earth*. Some People call it *Collyrium*, because it serves sometimes to relieve the Eyes; the other is crusty and hard, tho' something unctuous; they call this *Samius Aster*, because it is found in shining Spangles, like Stars.

Besides these, there is *Marga*, *Lithomarga*, *Stenomarga*, *Medulla Saxorum*, *Agaricus Mineralis*, *Lac Lunæ*, or *Stone Pith*, *Mineral Agarick*, or *Moon Milk*, which is a kind of soft, friable, pithy, very white Stone, resembling Chalk, which is found in the Clefts of Rocks in some Parts of *Germany*; it is deterfive, astringent, drying, consolidating, dissolves coagulated Blood, and may be used inwardly and outwardly.

Mr. Pomet, at the End of his Chapter of the Fossil, Unicorns Horn, observes that there is some of this *Stone Pith* found on the Side of the Signiory of *Moscau*, belonging to the Elector of *Saxony*, and near *Gironne* in *Catalonia*; where the Inhabitants chuse from among this Earth, after the Sun is down and has warmed it, little Balls like Meal, with which they make Bread, mixing it with some true Flower, which has been confirmed by several other Naturalists.

[The *Persian Earth* is got in great Quantities in the Island of *Ormuz* in the *Persian Gulf*, and carried thence to *Swat*, *Bengal*, and other Parts of the *East Indies*, where it is used in painting Houses, Ships, &c. It is a red Oker, and we have in *England* an Earth of a brighter Red, and much preferable to it, found in the Fissures among Iron Ore in the Skrees in *Cumberland* and elsewhere.]

The Earths afterwards mentioned by our Authors, and a Multitude of other Marles, Chalks, and Clays beside, hold their Places in the Catalogues of Official Minerals of several Authors, but as they are scarce ever prescribed, or kept in the Shops, it would be but tedious and unnecessary to give the History of each of them in this Place; instead therefore of swelling the Book with that, I shall add, in the few following Pages, a short Account of such Drugs as are in Use among us, and are not mentioned by our Author, some of which I suppose he omitted thro' Forgetfulness, and others to have been only known since the time he wrote.]

A P P E N D I X

T O

P O M E T's *History of* D R U G S.

C H A P. I. Of B I T U M E N S.

Of Barbadoes Tar.

BARBADOES Tar, as it is commonly, but improperly, called, is the *Pisselæum Indicum Offic. Bitumen Barbadenſe*, Boerh. Chem. *Pix Barbados*, Boerh. Theſaur. Pharm. 108. It is of the Number of the liquid Bitumens, and is about the Conſiſtence of Tar, of a dusky reddish black Colour, and strong bituminous, disagreeable Smell. It is brought to us from the Islands of *Barbadoes*, *Nevis*, and *St. Christophers*; but used to be most plentifully from the first, whence it had its Name. It oozes out of the Earth in small Quantities in many Places, and is generally found in digging at about fifteen or twenty Feet from the Surface of the Earth, mixed with Water; but what we receive of it is in general not dug, but gathered from the Waters, on which it swims like the *Asphaltum*, and some other Bitumens, having found its way into them by oozing from their Banks or Bottoms; this is preferred to what is dug, not only because it is more easily come at, but because it is cleaner, and of a better Smell; the first is owing to the washing it has in Storms, and the last to the Exhalation of some of its fetid Oil by the Heat of the Sun.

It is a coarse unpleasant Medicine, but certainly an admirable Balsamick; and the common People, by whom it is much more used than by the Apothecaries, find it of great Efficacy in obstinate Coughs, and many Disorders of the Breast, but they have sometimes found Mischief enough by it, by not knowing the general Caution, of avoiding all Things of this Class in Inflammatory Dispositions.

Externally, which was the first Way it came into Use, it is a good Digestive: and is a mighty Remedy with some for Agues, tied about the Wrists and Feet.

Beside these Virtues, which indeed are more known and oftener experienced by the common People than by those who deal in it, it serves our London Druggists and wholesale Apothecaries in two different Capacities; mixed with a small Quantity of Oil of Aniseed, it makes the famous Balsam of *Chili*, so much talked of some Years ago, and of which some Persons have yet a great Opinion; and a small Quantity of it put into Oil of Turpentine, turns it into what they call and sell for Oil of Spike.

As to the Choice of it; it ought to be clean, clear, and fluid, of a middle Colour between common Tar and Treacle, of a nauseous bituminous Taste and disagreeable Smell.

C H A P. II. Of Oil of Earth.

THE Oil of Earth, *Oleum Terræ Offic. Lem.* Ind. 388. is a thin, fluid Bitumen, very inflammable, of a nauseous Taste, and sulphureous, penetrating, disagreeable Smell; it oozes out of Rocks on the Sides of Mountains in *Asia*, *Persia*, and the *East-Indies*, and is of two Kinds, the red, and the black, as it is called, though that truly is of a dusky purple Colour; both kinds are found in the same Mountains, the dark-coloured near the Foot of the Mountain, and the red higher up. They have been brought to us from many different Parts of the *East-Indies*, but are seldom used or kept in the Shops at present, the *Petroleum*, of which they are also a kind, being generally sold in their Places.

Authors,

Authors, however, are too hasty in affirming them to be the same with *Petroleum*; their having the same Production is but an idle Reason, and I have at this Time before me a small Quantity of the dark-coloured Oil, given me by a Person of Veracity, a Surgeon of an *East-India* Ship, who caught it from a Rock himself in the Island of *Sumatra*, which is evidently different from all the Kinds of *Petroleum* I have yet seen, both in Taste and Smell, in both which it evidently shews that it contains a Sulphur not to be found in any of the other liquid Bitumens.

Beside this natural *Oleum Terræ* of the *Indies*, there is sometimes brought from thence a thick brownish Oil, of a fat insipid Taste, and without Smell, called also *Oil of Earth*; this generally comes in earthen Vessels, and is seldom found in the Shops, but often carefully kept and much esteemed by Persons who have been in the *East-Indies*, and seen the Cures that have been attributed to it. It is a compound Oil, made principally by the *Chinense*, from certain medicated Earths crumbled to a kind of Powder, and boiled in an expressed Oil made from the Fruit of one of the *Cocoas*.

The natural *Oleum Terræ* is in great Esteem with the Natives for all cutaneous Eruptions; they take it inwardly, about half a Dram for a Dose; and use it externally also as an Ointment to the Sores: They also give it to Children in Convulsions, and to their Women in Labour. With us it is scarce ever seen or used.

The factitious is their great Remedy against the Bites of envenomed Creatures, and their most esteemed and general external Application in Tumours of all kinds.

As to the Choice of these Oils, little need be said, they are so seldom to be met with genuine now; however, the sulphureous Smell which is peculiar to the first kind distinguishes it from all others. The other, if it were of common Sale, might be easily counterfeited, but as it is only to be found in the Hands of those who have themselves imported it, there is no great fear of its being other than genuine.

CH A P. III.

Of STONES.

Of Irish Slate.

IRISH Slate is the *Lapis Hibernicus Offic.* *Lapis fissilis Hibernicus Charlt. Foss. 13.* *Artemisia Hibernica, Tegula Hibernica, Ind. Med. 57.* It is a heavy, fattish, flaky Stone, soft, and of a bluish or greyish Black, of an aluminous and earthy

Taste, and without Smell; it is dug in many Places in *England* and *Ireland*, and we have it brought to the Shops in Glebes of different bignesses.

It is by some said to be a good Medicine in Intermittent Fevers, but its great Use is in Contusions and inward Injuries, in which Cases the common People found great Benefit by it, and long used it before it was known in the Prescriptions of Physicians; it has, however, of late been found to exceed almost all Things in Hæmorrhages of all kinds.

As to its Choice little need be said, as it is too cheap to be worth adulterating; the softest and such as separates into Flakes the easiest is the best. One thing, indeed, I may add as a Caution, though I hope unnecessary, which is, to see that there is not Cobalt accidentally mixed among it: It is a thing not likely to happen often, but as I have known two Instances of it, and as it is a thing of very fatal Consequence if it does happen, I thought it well to mention it. The Description given already of Cobalt in its proper Place, will shew how to distinguish them, which indeed is very easy were it only by the different Hardness; and the Instances I have known of it are; the one, the Death of a poor Woman, who perished within a few Hours after taking it, and had all the Symptoms of those who have been poisoned by Ratsbane; and the other, that among a Quantity I bought in the Year 1742, I found a fair Piece of Cobalt, of more than four Ounces weight, which I still have by me: This convinced me, that I had before guessed right, in my Opinion of the Occasion of the Woman's Death, and obliged me to throw away the Parcel of *Lapis Hibernicus* it was among, as I would advise every one to do wherever any of it is found, small Pieces of it being not easily discoverable among the small Pieces of the other, and a very little of it being sufficient to produce fatal Consequences, as it is the strongest of all Poisons.

CH A P. IV.

Of VEGETABLES.

Of Moxa, or China Gout-Cotton.

THE *China Gout-Cotton*, as it is called, or *Moxa* of the Shops, is a thready Substance, made of the fibrous Parts of the Leaves of *China Mugwort*. The *Artemisia Chinensis, cujus Molugo Moxa dicitur, Plu. Phytogr. Tab. 15. Hist. Ox. 3. 5. Artemisia Orientalis, vulgaris facie, Aët. Philos. Lond. N° 276. Musia Patræ. Malab. Moxa, Kempf. App. 27.* It is of no other Use in Medicine than the laying a small Heap of it upon the

the Foot, and burning it there, as a Remedy for the Gout. Its Virtues on this Account have been much celebrated, but there do not seem many at present who have any great Faith in the Accounts.

C H A P. V.

Of Couhage, commonly called Cow-itch.

COUHAGE, commonly called *Cow-itch*, is a downy or hairy Substance, growing on the out-side of the Pod of the *Couhage* or Stinging Kidney-bean of the *East-Indies*; the *Phaseolus Zurattensis filiqua hirsuta Couhage, dicta, Rai. Hist.* 1. 881. *Phaseolus filiqua hirsuta, Park.* 1056. *Phaseolus pruritus excitans hirsutiae filiquarum, Ger. En.* 1215. *Phaseolus Zurattensis filiqua hirsuta pungente, Hist. Ox.* 269. The Pods of this Plant are smaller, shorter, and rounder, than those of the common Kidney-bean; and the Hair that invests them, plentiful, short, and of a shining Brown: They are brought to us from the *East-Indies*.

The Down or Hair is of no Use but to play Tricks with, causing a troublesome Itching wherever it touches the Skin: The Beans taken out of the Pod, and reduced to Powder, are a common Medicine in *Barbadoes* for the Dropsy.

C H A P. VI.

Of Cassumunar.

CASSUMUNAR, called also *Cassumuniar*, *Casumunar*, and *Rysagon* or *Risagon*, is the Root of the *Zedoaria Radice lutea, Breyn. Prodr.* 2. 105. *Zerumbeth seu Zinziber rubrum sylvestre, Ternatense. Camel. Syll.* 65.

It is a tuberosé Root, of the Thickness of one's Thumb, and covered with Protuberances like those of the *Galangal*; of a dusky brown on the outside, and a pale yellow within; of a bitterish aromatick Taste, and agreeable Smell.

It is brought to us by the *East-India Company* from *Bengal* and *China*; it is a noble Medicine, and found of great Use in all nervous Cases, Apoplexies, Palsies, Vertigoes, and hysterick and hypocondriac Affections; it is also carminative and astringent.

It is to be chosen in large Pieces, sound, firm, and hard to powder; of a bright yellow within, and of a piercing lively Smell, and aromatick Taste.

C H A P. VII.

Of Salep.

SALEP, called also *Saleb*, and *Serapias* in the Shops, is the Root of the *Orchis fœmina procerior majore flore, Tourn. Herb. Par.* 508. which indeed seems to be no other than our common female Orchis. The *Orchis morio fœmina, Park.* 1347. *C. B. Bin.* 82. *Cynosorchis morio fœmina, Ger.* 158. with the Advantages of a warmer Climate, in which it grows to a greater size.

It is a whitish oblong Root, a little flattened and wrinkled in the drying, tough and hard to be powdered, of a Taste somewhat resembling Gum Tragacanth, and without Smell.

It is brought to us from *Turky* and *Persia*, and grows in the greatest abundance and perfection on the Mountains of *Bursia* near *Constantinople*.

It is a great Restorative, and is good in all Decays; it is also esteemed a Provocative and Remedy against Barrenness. The *Turks* have it in great esteem; their manner of taking it is boiled with Honey, Ambergrise, and Ginger, and drank hot in the manner of Chocolate. The general manner of using it here, is to put about a Tea-spoonfull of the Powder of it into a Basin of warm Water, which it turns into a Jelly.

It is to be chosen firm, hard, and tough; and the great Caution is, that it be neither worm-eaten nor mouldy.

C H A P. VIII.

Of Elatherian Bark.

THE Elatherian Bark, called also the *Indian Bark*, and *Cascarilla*, is the *Cortex Thuris nonnullis dictus vel Thymiamia, Rai. Hist.* 2. 1841. *Schakarilla Chakarilla, Mont. Exot.* 8. *Elaterii vel Elatherii Cortex Thymiamia, Schrod.* 4. 166. *Palo de Calenturas quibusdam Eleaterium, Lem. Ind.* 203.

It is a thin firm Bark, rolled up into hollow Quills, as they are called, like the *Cortex Peruvianus*, commonly in small Pieces of the thickness of Cinnamon, smooth, and of a dusky brownish Colour; for it is generally brought to us stripped of its outer Rind, which is of a whitish Grey, and rough. It is of a sharp aromatick bitter Taste, and an agreeable Smell, something like that of Amber.

There have been various Conjectures about the Tree which produces it, some believe it to be
C c the

the *Νάγκαρθον* or *Νάγκαρθον* of *Dioscorides*, lib. i. c. 22. and *Cæſalpinus*, *Amatus*, *Parkinson*, and *Caspar Baubine*, have all different Opinions about it, which of them, or whether either of them is in the right, is yet unknown.

It is sometimes brought from the *East-Indies*; but we have it principally from *Elatheria*, one of the *Bahama* Islands, whence it has its Name.

It was first taken notice of for an agreeable Oil which it yields by Distillation, which was formerly much used to put into Snuff, to give it an agreeable Smell; but it is now come into Use internally, Mr. *Stahl* having strongly recommended it as an excellent Medicine in Disorders of the Lungs, and a good Stomachick. *Apenus*, a German Physician, has also written a Treatise about it, in which he praises it in malignant Fevers, the Plague, Dysenteries, and Weakness of the Intestines.

It is to be chosen light, but firm, smooth, and of a lively agreeable Smell, and as fresh as may be, for it loses much in keeping.

CH A P. IX.

Of Elaterium.

ELATERIUM is the inspissated Fæculæ of the Juice of the Wild Cucumber, the *Cucumis Agrestis*, ſive *Asinus*, *Park.* 161. *Cucumis Elaterium*, *Rivini Rupp. flor. gen.* 41. *Cucumis Elaterium Officinarum*, *Boerb. Ind.* 77.

It is usually met with in small flat whitish Lumps or Cakes, dry, and easily breaking between the Fingers; of an acrid nauseous bitter Taste, and strong disagreeable Smell when fresh made; but that, as also indeed a great part of its Virtue, it loses in keeping.

What we have of it is brought from *Spain* and the southern Parts of *France*, where the Plant is very common.

It is a very violent Purge and Vomit, and is now very seldom used; the Dose is from two to four Grains. The lightest, cleanest, and freshest is to be chosen.

CH A P. X.

Of Jamaica Pepper, or All-Spice.

PIMENTA, or *Jamaica Pepper*, is the dried unripe Fruit of the *Myrtus arborea foliis Laurinis aromatica*, *Aët. Phil.* 192. the *Piper odoratum Jamacense nostratibus*, *R. Hist.* 2. 1507. *Piper Caryophyllatum*, *Piper Jamaicense*, *Mont. Exot.* 9.

Caryophyllus aromaticus Americanus Lauri acuminato folio fructu orbiculari, *Pluk. Alm.* 88.

It is an orbicular Fruit, with a dusky, rough, hard, umbilicated Rind, containing within it two black Kernels, of an aromack Smell and Taste approaching to that of Cloves, and partaking in some degree of that of all the other Spices beside, which occasioned our calling it *All-Spice*.

The Tree which produces it rises to thirty or forty Foot high; the Leaves are like those of the Bay, and very aromack; the Flowers stand in Bunches, and are greenish, and composed of four Leaves bent backwards; these are succeeded by the Fruit, which the Negroes gather before it is ripe and dry it in the Sun; they become wrinkled and brown in the drying, tho' they were smooth and green while gathered. The Tree grows in hilly Places in the north Part of *Jamaica*.

It is an admirable Aromack, and its Oil, by Distillation, is a very excellent one, and sinks in Water like Oil of Cloves.

CH A P. XI.

Of the Root Nisi, or Ginseng.

GING-GING is a Plant to which *Pomet.* the *Chinese* have given this Name because it has the Figure of a Man opening his Legs, for they call a Man *Ging*; its Root has a good deal of Resemblance to the Mandrake Root, but that it is much smaller, and its Leaves shew very plainly that it belongs to another Class of Plants. *Father Martin*, indeed, who had seen nothing but the Root, makes it a Species of the Mandrake, in the Description he has given in his Atlas of *China*; but the Reason of his falling into that Error, was his not having seen the Leaves, as he himself says. This Root becomes yellowish in drying; it has neither Fibres nor Filaments adhering to it, by which to draw Nourishment; it has a number of small black Veins scattered all over it, and looking like so many Lines curiously drawn on it with Ink; when chewed it is disagreeable, its Taste being a Sweetness mixed with Bitter.

It greatly encreases the vital Spirits, in a Dose not larger than two Scruples; in a something larger Dose, it recovers Strength to People who are weak, and gives an agreeable Warmth all over the Body. They use it after a Preparation in *Balneo Mariæ*, which gives it an agreeable aromack Smell: Those who are of a hot and robust Constitution endanger their Lives if they take too largely of it, because of the vast Effervescence it raises in the Spirits; but it does even Miracles for the Weak

Weak and Feeble, and those whom long Illness, or any other Accidents, often exhaust of their Strength. It restores in such a manner Strength and Spirits to People who are dying, as to give Time for other Remedies to cure them, and in *China* is worth three times its Weight in Silver.

The *Siam Journal*, speaking of the Root *Nisi* or *Ginseng*, says it is a small Root which grows in *China*, in the Province of *Houn-amsout-chouan*, and that of *Couli*, and is not to be found in any other Part of the World: Its great Effects are the rectifying the Mass of Blood, and giving Strength and Spirits to those who have lost them. The manner of taking it is this, they boil some Water, and throw into it the Root cut into thin Slices, and then cover the Vessel and leave the *Ginseng* in Infusion; when the Water is but just warm, they drink it alone; this they do in the Morning fasting: The *Ginseng* they take out, and keep it to use again: At Night they boil more Water, but only half as much as they did before, and put the same *Ginseng* in again, covering the Vessel as before; and when it is cold they drink it. After all this, they dry the *Ginseng* in the Sun; and if there is Occasion it serves them a third Time infused in Wine. The Quantity of *Ginseng* put in is according to the Age of the Person it is for; for Persons from ten Years old to twenty, they use each Time the Quantity of half a Soang; and from thirty to sixty, seventy, or upwards, the Quantity of a Mayon; and more than this they never take.

C H A P. XII.

Of Birds-Nests.

Pomet. **T**HESE Nests are found principally in *Cochin China*; they are excellent in Sauces, and good for the Health; when they mix the *Ginseng* with them, they take a Fowl whose Flesh and Bones are black, they gut it and clean it carefully; then they take some of these Nests, which they soften with Water, and part into small Threads; they then cut some *Ginseng* into small Pieces; and mixing all together, put it into the Body of the Fowl; they then sew up the Fundament, and put the Fowl, thus prepared, into a China Vessel, close covered, which is put into a Pot of Water, and set on the Fire to boil: They keep this Pot of Water boiling, till the Fowl in the Vessel within is enough; and after that, leave all together on the Reminders of the Fire all Night: In the Morning they

take out the Fowl and eat it, *Ginseng*, Nests, and all, without either Salt or Vinegar; and when they have eat it up, they cover themselves warm, and commonly get into a Sweat.

Rice may be also eaten boiled in the same manner in Water with the *Birds-Nests* and *Ginseng*: This they eat at Day-break, and, if they can, sleep after it.

C H A P. XIII.

Of Sowbread.

SOWBREAD, so called because *Pomet.* Hogs are very fond of it, is a large, thick, round Root, of a dusky Colour without, and white within; hung round with blackish Fibres. It contains a great Quantity of Oil and essential Salt. It grows in Woods and in watery Places.

Chuse this Root new, and well fed: It is emetic, cathartick, and resolvent; but is not much used except externally, or as an Ingredient in certain *Galenical* Compositions, as Ointments, Plasters, and others.

Sowbread, called *Cyclamen orbiculato folio interne purpurascente* by *Tournefort*, *Lemery.* and *Cyclamen Autumnale vulgare folio rotundo* by *Parkinson*, is a Plant whose Leaves are roundish, of a greenish Brown, spotted with White on the upper side, and purplish underneath, standing upon Pedicles; among these there rise long tender Pedicles, which carry purple Flowers of an agreeable Smell; when they are fallen, they are succeeded by spherical membranaceous Fruits, which open in several Places, and contain angular Seeds.

The Root of it, which is large and thick, is what is used in Medicine: It is incisive, detensive, attenuating, and aperient; proper in the Stone and Obstructions, to bring away the Afterburthen, and to dissolve hard Swellings. It is used both externally and internally.

Great Care must be taken in drying it, else it will shoot, and even flower, when laid up for Use.

[This is the Root of the *Cyclamen orbiculato folio*, *Ger.* 694. *Cyclamen vulgare folio rotundo*, *Park. Parad.* 198. It is kept in Gardens, and flowers in *September*.

It is an Errhine, and, internally, has been known to do Service in Obstructions of the Menses, and other Cases of a like Nature, but at present is scarce ever used or kept in the Shops.]

C H A P. XIV.

Of the Rose of Jericho.

Pomet. **T**HE *Rose of Jericho* is not a Flower but a very small Shrub, which throws out several Branches to the height of about four Fingers; they are woody, of an ashy Colour, and divide afterwards into a multitude of Branches entangling themselves one within another, and throwing themselves together toward the Top in the Form of a Globe; its Leaves are an Inch or an Inch and half long, and half an Inch wide, cut at the Edges, and covered with a hairy Down; its Flowers are small and white, and set as it were in Clusters; its Seeds round, reddish, and of an acrid Taste; and its Root single, large, and woody.

It is brought to us from *Arabia Desart*. I shall not trouble the Reader with the many Things which some Authors have diverted themselves with observing in regard to this little Plant, leaving the farther Accounts of it to the Curious, as it has no Use in Medicine.

The *Rose of Jericho*, called *Rosa Lemery*. *Hierachuntia* by *Caspar Bacchine*, and *Rosa de Hiericho*, and *Rosa Mariæ Monachis* by *Lugdunensis*, is a little Shrub in the Figure of a Ball as brought to us; but this it acquires in drying, for, while it is growing, its Branches are separate from one another, but as it dries, the Branches entangle one within another, and their Extremities bending inward meet at one common Centre, and form of the Whole as it were a little Globe or Ball. It grows in *Arabia Desart*, in sandy Places, and on the Banks of the *Red Sea*, from whence we have it; and though its common Name be *Rose of Jericho*, it is not a Rose, nor is it found any where near that Place. It has been believed heretofore, that it never opened itself but on *Christmas-day*; but we now are very sensible, that it will open at any time if it be put into Water, and suffered to remain there some little time, the Branches expanding by little and little, and affording a very pleasing Sight: And when it is taken out of the Water, it dries and shuts itself up again as before.

It may serve for an Hygrometer; for being dry, it is very susceptible of the Impressions of the Humidity of the Air; so that in a dry Season it will be shut up closely, but as it becomes more or less wet, it will extend or expand itself: This may be the more easily perceived when it is exposed to the Air, than when kept in a Chamber.

As to its medicinal Virtues, it is esteemed good for the Scurvy, when taken in Powder or Infusion, but I have never known it tried.

[This little Plant is the *Thlaspi Rosa de Hiericho dictum*, *Histor.* 328. *Rosa Hierachuntea vulgo dicta*, *C. B. Pin.* *Rosa Hierachontea*, *Lobel.* It is about four Inches high, the Leaves are like those of the Olive, standing singly at every Joint; the Flowers stand in the setting on of the Leaves, and are of a greenish White, and consist of four Leaves; each of them is succeeded by a single Capsula, containing Seeds like those of the other *Thlaspis*. In drying the Leaves generally fall off, but the Pods are frequently seen very fair among the dried Stalks.

The Experiments *Pomet* mentions Peoples diverting themselves with about it are, its expanding in warm Water, which indeed is a very agreeable Sight.

It is of no Use in Medicine, and seldom kept in the Shops, but common in the Collections of curious Persons.]

C H A P. XV.

Of Gum Guaiacum.

IN the Chapter of *Guaiacum Wood* we *Pomet.* made some mention of this Gum, but to what was there said it is necessary to add, that, to distinguish it from *Colophony*, it need only be put to a Candle, or into the Fire, for, on burning, it yields an agreeable aromack Smell. This Gum is brought to us from the *West-Indies*, and ought to be in handsome Pieces, of a blackish or greenish Colour, transparent, and of an agreeable aromack Smell.

It is sudorifick, vulnerary, and anodyne, taken inwardly from a Scruple to a Dram, mixed with an equal weight of Sugar-candy: It is also good in Difficulty of Breathing, and in Astmas; in which Cases it is common to add to it an equal Quantity of washed Sulphur, and mix them together into a Bolus with Syrup of Coltsfoot, and give them in the Morning for eight Days successively, or longer if necessary; in short, according to the Obstinacy of the Disease, or Orders of the Physician.

Gum Guaiacum is to be chosen clean, *Lemery.* shining, and transparent, of a reddish brown Colour, brittle, of an acrid Taste, and agreeable aromack Smell when bruised or put to the Fire.

It contains a great Quantity of essential Salt and Oil.

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[This is the Gum, or rather Resin, of the *Guaiacum* Tree, described in its proper Place : It flows either naturally from the Clefts and Cracks in the Bark, and is then in Tears or single distinct Drops, or by Incision, by which means it flows in much greater abundance, and is suffered to run into large Cakes of an irregular Shape. It is a noble Medicine, but so subject to Adulteration, that there is scarce any depending on it ; that in Tears, however, is almost always genuine.]

C H A P. XVI.

Of the precious Boar-stone of the East-Indian Wild Boar, and the Malacca-stone, or Porcupine-stone of the Indies.

Pomct **T**HE Boar or Hog-stone, which the *Hollanders* call *Pedro de Porco*, and which the *Portuguese*, who first brought it into *Europe*, call *Pedro de Vasso*, or *Piedra de Puerco*, is a kind of Bezoar found in the Gall of the Wild Boars of the *East-Indies*. This Stone is generally of the bigness of the Hazel-nut, or of the End of ones Finger, of different Figures and Thicknesses ; but its general Colour is that of the *Toulon* Soap, that is, of a White with some cast of Greenish in it ; and it is soft in handling.

These Stones, however scarce, are yet to be found in the Collections of the Curious. The Scarcity of it is so great, that in the largest Sales of *East-India* Drugs at *Lisbon* and *Amsterdam*, there are seldom above three or four of these Stones.

The *Indians* call these Stones *Masheba de Soho* in their Language, and have a great Esteem for them on account of their Virtues against Poison ; and the People of the Kingdom of *Malacca*, where they are mostly found, prefer them to the true *Oriental Bezoar*, though among the other *Indians*, that is esteemed the best Antidote in Nature.

The *Pedro de Porco* is very scarce among the Merchants of *Holland*, and much more so among ours ; whether it be that it is scarce in the *Indies*, or whether the Natives keep it among themselves for their own Use, not only as a Preservative against Poisons, but also as a sovereign Remedy against the Disease they call *Mordaxi*, which they are subject to from an irritated Gall, and which is as dangerous with them as the Plague in *Europe*.

When any of these Stones are brought into *Holland*, they sell there for three or four hundred Franks apiece, and sometimes more ; but the wealthy Merchants most frequently keep them in their own Hands, either to make Presents to People

of Quality, or to use themselves. They are generally set in a round gold Box pierced full of Holes, with a Chain of Gold fastened to it to hold it by upon Occasion.

There are some Families of Consequence in *Holland* who preserve this Stone, and have it from Father to Son for many Generations ; and it serves all their Friends and Acquaintance when they have Occasion. The principal Use of it among them is to cure Children in the Small-pox.

Many other Virtues are also attributed to it, against Fevers, and most of the Womens Complaints. The *Indians* have that Confidence in it, that they think it is sufficient to touch it, to have Relief in all their Illnesses. Women with Child, however, are not to meddle with it for fear of Abortion.

When this Stone is to be used, it is held a little while suspended in a Glass of Wine or Water, to which it communicates its Virtues, with some degree of Bitterness, not altogether disagreeable ; this is to be drank in the Morning fasting, but may be taken at any Time on pressing Occasions.

Beside the *Pedro de Porco*, there is another Stone, generally called the *Malacca-stone* or *Indian Porcupine-stone*, because it is almost only in this Kingdom that they are found. Most People confound the *Pedro de Porco* with the *Malacca-stone*, because of the great Resemblance they have to one another, which I am certain of by that which I have in my possession, which only differs from the *Pedro de Porcos* in Bigness, and in that it is something more scaly, like the *Bezoar* and other such Stones. These Stones are found, but very scarcely, in the Gall, Stomach, and Head, of the Porcupines of the *East-Indies*.

This, as well as the *Pedro de Porco*, is often made a Present to Great Persons in the Kingdom of *Malacca*, as also to Foreign Princes and Ambassadors. *Garcias* relates, that in his Time the Viceroy of the King of *Portugal* in the *Indies* kept by him one of these Stones, which had been presented him by the then King of *Malacca* : From which we may learn what Esteem those Nations had for this Stone. This is the first kind of the *Malacca-stone*.

There is also another, which Mr. *Tavernier* mentions, and which is found in the Head of the Porcupine : But as I have never seen one of these, I shall forbear saying any thing farther about them.

After the *Oriental* and *Occidental Bezoar*, may be reckoned a third kind, *Lemery* called *Bezoar Porci*, five *Lapis Porcinus* : It is taken from the Gall of the Wild Boar, in *Malacca*,

Malacca, and some other Parts of the *East Indies*. It is commonly whitish or greenish, but sometimes of other Colours; about the bigness of a Nut. The *Indians* have it in great Esteem in the Disease they call *Mordoxi*, as also in the Small-pox, Malignant Fevers, Hysterical Affections, and Suppressions of the Menfes.

[The *Pedro de Porco* and *Malacca-stone* are really but one and the same Thing, and that not found in the Boar but in the Porcupine. The different Size and Colour of the Stone, and the mistaken and afterwards right Accounts of what Creature it was taken from, have occasioned the Error of making two different Stones of it.

It is the *Bezoar Hystricum*, *Lapis Hystricis*, *Lapis Malacensis*, *Lapis Porcinus*, *Mont. Ex. 5.* *Lapis seu Pila Hystricis*, *Ind. Med. 45.* It is found in the Gall-bladder of the Porcupine in *Malacca* and other Parts of the *East-Indies*, where that Creature grows to the bigness of a Pig of eight Months old, and is called by the Natives *Balatnamentinie*, *Hystrix. R. Syn. An. 206.* *Jonsf. de Quadrup. 119.* *Charlt. Ex. 19.* The Stone, as it is called, is rather of the *Ægagropilus* than *Bezoar* kind, being neither so hard, so firm, nor so heavy, as the true *Bezoars*, nor of the same regular laminated Structure. Its Virtues, though so highly extolled by the Natives and Merchants, and others who had them of them, are very much doubted by Men of Science: It is, however, of no great Consequence, whether they are real or imaginary, as it is too scarce ever to come into Use in the Shops.]

CHAP. XVII.

Of the Serpent-stone.

Pomet. **T**HE *Serpent-stone*, which the *Portuguese* call *Cobra De Capello*, is found in the Head of a Serpent so called, because he has on his Head a little Eminence in the form of a Hat. They say there is no Remedy so sovereign as this Stone against the Bites of venomous Beasts, for if put upon the Wound, it fastens itself strongly on, and draws out the Poison, of which, when it is full, it falls off again of itself, having no more Power to stay on; but if it be thrown into Milk, it discharges there the Poison it had imbibed, and recovers its former Virtues. Father *Kircher* says, that it was a long time before he would believe this, though he found it affirmed by Authors of Credit as a certain Truth, but that he was at length convinced of it, by an Experiment which he himself made of it, in the Presence of many Persons, on a Dog bitten by a Viper.

This Account is also confirmed, by a Relation sent to the Prince *John Frederick Duke of Brunswick and Lunenburg*, to whom all the Men of Learning in his Time sent Accounts of what new Discoveries they made, not only because he was curious, but because he was a Master in most of the Sciences. *Tachenius*, in a Letter which he wrote from *Venice* on the 27th of *April* 1688, acquaints that Prince, that desiring to make an Experiment in Tryal of the Virtues of one of these Stones which an *Armenian* had brought to *Venice*, he caused a Dog to be bitten in the Leg by a Viper; half an Hour afterwards, when they perceived by the Howlings of the Creature, and the swelling of the Limb, that the Poison had spread itself into the Veins, and caused the Creature great Pain, the Count *De Schlick*, before whom the Experiment was made, applied the *Armenian's* Stone to the Wound, and immediately it fixed itself so firmly on it, that there was no pulling it off: And upon this, the Creature ceased his howling. The Stone remained fixed in this manner on the Wound two Hours, at the end of which Time it fell off of itself, and was put into some Milk, which it impregnated so strongly with the Poison, that a Dog that drank of it died the Night following.

It was then placed again upon the Wound; it fastened itself again as before, but remained on now only half an Hour, and then fell off: Being again put into more Milk, it communicated the Poison to it also, but in a smaller degree; for at the Time of his writing that Letter, it was three Days since another Dog had drank of that second Milk, and he was then living, and there appeared Hopes of his recovering entirely.

It was, after taking out of the second Milk, applied a third Time to the Wound, but did not then fasten itself at all, there being then no Poison remaining in it.

Mr. *Tachenius* adds, that the Stone was round, black, of the bigness of a *French Sol*, but four times as thick; and that the *Armenian* said, it not only cured the Bitings of mad Dogs and venomous Beasts, but was also a sovereign Remedy against the Plague.

There are two kinds of the *Serpent-stone*, the one natural, the other factitious; the natural Stone is found in the Head of a large Serpent very common in *Melinda*. As I never have been able to get one of these natural Stones myself, I shall here relate what Mr. *Tavernier*, the only Author I can find who has given a circumstantial Account of these Stones, has said of them.

“ There is a kind of Stone, says he, which they call the *Hat-Serpent-Stone*; this is a particular kind

“ kind of Serpent, which has in reality a kind of
 “ Hat or Hood hanging down behind his Head;
 “ and it is behind this Hood that these Stones are
 “ found, the least of which are of the bigness of
 “ a Hen’s Egg. These Stones are found in none
 “ of these Serpents that are less than two Foot
 “ long; and if they encrease in Bulk as the Crea-
 “ ture grows, there must of necessity be some of
 “ an enormous Size; for in *Africa* and *Asia* these
 “ Serpents are sometimes seen five and twenty
 “ Feet long, as that was, the Skin of which is
 “ preserved at *Batavia*, which had swallowed a
 “ Girl of eighteen Years of age.”

The same Author observes, that this Stone ‘is not hard, and that when struck against another Stone, it throws off a kind of Slime, which being moistened with a little Water, and drank by any one who has any kind of Poison within him, has the Virtue of expelling it in a Moment: That these Stones are not to be had but by means of the *Portuguese* Seamen or Soldiers who return from *Mozambique*. It is not of this Stone, however, that I intend to treat in the Remainder of this Chapter; but of that which makes so much Noise in the World, and of which so many extraordinary Virtues are boasted, and which, though most People imagine to be a natural Stone, is really factitious, as will be seen by the Sequel of this Chapter.

Now I have shewn the high Esteem in which this Stone is held, and the different Sentiments of different People about it, I shall add, that we are not to believe this Stone to be natural but factitious; and for the Proof of what I affirm, I shall add here an Account of what it is composed of, that those who are desirous of having it may make it themselves, as I have done by several which I have now by me.

Take *French Bezoar*, one Ounce; Powder of Toads and of the Crayfish, prepared in the Month of *June*, of each half an Ounce; of Seal’d Earth, prepared in a Decoction of *Scorzonera* and *Contrayerva* Roots, one Ounce; Mineral Unicorn, one Ounce; reduce all these to a fine Powder, and make them up into a Paste with the Jelly of Vipers made with a Decoction of *Contrayerva*, *Snakewood*, or *Virginian Snakeroot*, and form it into Troches of the bigness of a *French Farthing*, and of the same thickness; they may be made larger or smaller at pleasure, but the *Indians* generally make them of about this size.

This then is the so much renowned *Serpent-stone*. Besides the two Accounts already given of its Virtues, the following is what Mr. *Tavernier* has written of it.

“ Finally I shall speak of the *Serpent-stone*, which
 “ is about the bigness of a *French Farthing*, and
 “ sometimes of a somewhat oval Shape, thick in
 “ in the Middle, and growing thinner towards the
 “ Edges. The *Indians* say they are formed on
 “ the Heads of certain Serpents; but I am rather
 “ of opinion, that it is the Priests of these Idola-
 “ ters who make them believe so, and that the
 “ Stone, as they call it, is really a Composition
 “ which they make of some Drugs. But be that
 “ as it will, the Stone has admirable Virtues in
 “ extracting the Poison of venomous Bites: If the
 “ Part where the Bite is be not much torn, an
 “ Incision must be made in it, that it may bleed,
 “ and afterwards, when the Stone is applied to
 “ the Wound, it fastens itself on, and never drops
 “ off till it has imbibed all the Venom from the
 “ neighbouring Parts. To cleanse it afterwards,
 “ they take Woman’s Milk, or in want of that,
 “ Cow’s Milk; and after the Stone has been laid
 “ in it ten or twelve Hours, it takes in all the
 “ Venom the Stone had imbibed, and becomes
 “ of the Colour or the Matter of an Impostume.
 “ Having one Day dined with the Archbishop of
 “ *Goa*, he took me into his Cabinet of Curiosities,
 “ where he had many curious Things; and,
 “ among others, he shewed me one of these
 “ Stones, and telling me its Virtues, added, that
 “ it was but about three Days before, that he
 “ had seen the Experiment made with Success,
 “ one of the People who was with him in a Jour-
 “ ney having been bitten by a Serpent, and cured
 “ by it. I have bought several of them, and
 “ there are none but the Bramines who sell them,
 “ which makes me believe they make them. There
 “ are two Ways of trying whether these Stones
 “ are good and not adulterated; the first is, to
 “ to put them in the Mouth, for if they are good,
 “ they immediately rise and fasten themselves to
 “ the Palate; the other is, to put them in a Ves-
 “ sel of Water, and immediately, if they are not
 “ adulterated, the Water begins to boil, little
 “ Bladders arising from the Stone at the Bottom
 “ to the Surface of the Water.”

The *Serpent-stone*, *Lapis Serpentis* in *Latin*, is a flat Stone, sometimes oval, *Lemery*. but commonly roundish, thick in the Middle and thinner at the Edges, soft, and of a blackish Colour. Many Authors affirm, that it is found in the Head of a particular Species of Serpent; but the more modern Opinion is, that it is a Composition of several Drugs: But be that as it will, it is at present much esteemed in many Places.

It is a Remedy against the Poison of venomous Bites,

Bites, fastening itself to the Wound by means of the Blood about it; and for that Reason, if there is no Blood about it from the Bite, it is necessary to make an Incision about it with a Lancet, and with the Blood that comes from that, the Stone will fix itself; and as it is an Alkali and Absorbent, it naturally imbibes the Poison from the Wound, on which the Pain ceases. It falls off of itself when the Blood is dry, and furnishes no more glutinous Matter to hold it on, and when it has imbibed the Acids of the Wound is increased in Weight. After washing it in Milk, it is applied to the Wound again, where it fastens itself not so firmly as before, because there is less glutinous Matter to hold it, because it is less alkaline, and because there is less acid Matter in the Wound to hold it there. They continue washing and applying it again to the Wound till it will not stick on any longer at all; which is looked on as a Proof that all the Venom is drawn forth and the Person is cured.

The Virtues and surprising Effects of this Stone are attested by those two great Naturalists, *Kircher* and *Mr. Boyle*, who both affirm, that they have seen it tried. I wonder it has not yet been tried on the Bite of a mad Dog, to see whether its Virtues would exert themselves as powerfully in that as they are said to do in other venomous Bites.

This Stone is also taken inwardly; they use such small Pieces of it thus as are not fit for the external Application. They infuse it in Water, and take it to resist Poison.

[There is a great Diversity in the Opinions of the Learned about this Stone, as it is called, some affirming it to be natural, others factitious; some affirming the Certainty of its Effects, others doubting and denying them: But to set all right, it is to be observed, that there certainly is both a natural and a factitious kind of it, the natural is the *Os Capitis* of the *Cobras de Capello Lusitanis dictus*, *Garc. Serpens Indicus coronatus diademate seu conspicillo insignitus*, *R. Syn. An. 330. Vipera Indica vittata gesticularia. Cat. Mus. Ind.* This is of a deep shining Brown, and marked at certain Distances with little Holes; and the factitious is made of calcined Bones and argillaceous Earth, and is firmer, heavier, and smoother on the Outside; hence it is not wonderful if the Descriptions of Authors differ, who were perhaps describing different Things; or if the Experiments of some succeeded, and those of others did not; when some made them with the natural Bone, and others with the factitious. The factitious are of various Sizes, Shapes, and Colours, as some of them have been made by Persons who never saw

one of the natural ones; and others by those who have fashioned them exactly according to a natural one, which they have kept as a Pattern. I remember to have once seen two of them in the Hands of a Person who traded in Rhubarb and some other Drugs from the *East-Indies*, the one of which was as big as a Walnut, of a dusky Colour, and seemed an argillaceous or cretaceous Earth; and the other black and polished, which seemed made according to the nicest of all the Adulterations of it, of the Bone or Horns of some Animal burnt to a Blackness. The true and natural one I never yet saw.]

C H A P. XVIII.

Of the Fossil or Mineral Unicorn Horn.

IT is not without Reason that the *Indians* make this Stone an Ingredient in the *Snake-stone* before treated of; however, as it is a Drug so little known, and of which so few Authors have written, I shall add here what *Wormius* has written of it, that Physicians may know it, and bring it into Use.

The *Fossil Horn*, called *Ceratites* by *Gerner*, *Fossil Ivory* by *Clusius*, *Arabian Stone* by *Cisalpinus*, by some *Petrified Elephants Tooth*, and by others *White Steinmark*, has had all these Names given it by Authors, according to the various Forms it has in different Places appeared in.

It has great Affinity to some of the Kinds of *Osteocolla*, and has therefore by some been placed among the softer Stones.

It is a stony Substance, sometimes resembling a Horn in its Colour, Smoothness, and Shape; sometimes harder, sometimes softer, covered with an outer Crust, which is yellowish, black, or ash-coloured, and very hard, and filled within with a soft, white, light, friable Substance, compact and without Pores, astringent to the Taste, and drying, sticking firmly to the Tongue, and of an agreeable Smell: It is found in *Italy*, and many Parts of *Germany*, *Moravia*, *Silesia*, and *Saxony*.

Boetius gives this Account of the Matter and original Formation of it. "I take, says he, the
"productive Matter of these Horns to be a Marl
"of some kind, which is dissolved in the Bowels
"of the Earth by subterraneous petrifying Waters,
"and flows like Milk through the Cavities of the
"Earth, in which, if the adventitious Water be
"absorbed by the circumjacent Earth, or find
"Ways of running separately off, the heavier and
"firmer Parts filling up those Cavities remain in
"them, and coalesce by degrees as the Humidity
"gets

“ gets off, and takes the Form of a Stone or
 “ Horn, or only of a Marble, as before, according
 “ to the greater or lesser degree of petrifying
 “ Power the Water it was dissolved in, was en-
 “ dued with. This is the Reason why some Pieces
 “ of it are found large and thick, others small and
 “ slender. But if this lacteous Humour does not
 “ fall into a Cavity of the Earth, but into some
 “ Piece of Wood already deprived by Time of
 “ its own Juices, and insinuates itself into its light
 “ and porous Substance, and there the more fluid
 “ Parts run off, and the marly remain behind, it
 “ makes an entire Change in the Wood, and as-
 “ simulates all its Parts to its own Substance; yet
 “ leaves it so much of itself, that the Species of
 “ the Wood may sometimes be known, and its
 “ natural Odour yet remain in some degree in it.
 “ What in this System happens to Wood, may
 “ also happen to Ivory, or Stags Horns, or other
 “ Parts of Beasts, if they chance to lie in the way
 “ of this Fluor, and be in a Condition to receive
 “ it into their Pores.”

This Hypothesis seems entirely conformable to Truth, for the Virtues of this fossil Horn are the same with those of Marls, Boles, and Seal'd Earths; and what others imagine of the Horns of Unicorns dispersed into various Places at the Time of the Deluge, and changed into their Texture by Bitumens, stony Substances, Ambers, &c. carries little or no Probability with it.

The *Fossil Unicorn's Horn* is esteemed good in all malignant Diseases, the Plague, Malignant Fevers, and Poisons, like the *Terra Lemnia*; it strengthens the Heart, and preserves it from Malignity, and expels malignant Humours by Sweat: The Dose is a Dram, in Wine or any appropriated Liquor; or in Syncopes, Tremors, &c. a Scruple only, in some appropriated Liquor: It is also said to be good in Epilepsies, to destroy Worms, stay Fluxes and Hæmorrhages of all kinds, and for Runnings of the Eyes, mixed with Milk, and instilled into them; as also, by its astringent and drying Qualities, to bring Ulcers to cicatrize, and to cure Gallings and Burns.

It has, however, been very justly observed, that it is not to be expected that every Piece of this Fossil should possess all those Virtues, as there is a vast Diversity between different Pieces of it; and as they differ plainly in Form, Origin, and Substance; they very well may be supposed to differ also in their Virtues.

Such of them as are hard like a Stone, and have no internal softer Parts, nor any Smell, have scarce any other Virtues than merely those of drying. Such a Piece I have in my possession, which

is hard as a Stone, solid, heavy, and carrying the Appearance of a piece of Ash-wood; for the Veins, Striæ, and Laminæ it is composed of, are so marked with Knots and knotty Foramina, that it plainly has the external Appearance of a piece of Ash; for which Reason I have chosen to range it among the petrified Woods, rather than the fossil Horns. It has no Smell, nor any astringent Virtue.

Those which have the Virtues before mentioned, are such as are easily reduced to Powder, are soft, and adhere to the Tongue; and particularly, those which have an agreeable Smell are commended for Cardiacs, to strengthen the Heart, and defend it from Malignity. If the Substance of them before the Transmutation was a Part of the Stag or Elephant, or of the Ash or Walnut Tree, or any other Matter good against Poisons, this Fossil then possesses the Virtues of expelling and resisting Poisons; and the more so, if the Smell of the transmuted Substance be yet perceivable in it, as the Virtues of the original Substance are then judged not to have perished, and to be greatly exalted and improved by the adventitious Matter.

Some Fragments of this kind I have by me, one, of the thickness of an Arm, three Inches long, and two and a half in diameter; the external Coat of which being taken off, the internal Substance is very white, staining the Hands white in handling it, with blue and brownish Veins running longitudinally in it, adhering to the Tongue, and resembling burnt Hartshorn: This is of the weight of five Ounces, and I judge it to be of the best kind.

Another kind I have, which is of an Ash-colour, more compact than the former, but soft, and of an agreeable Smell, looking like burnt Hartshorn, and very astringent.

A third in my possession is brown, its external Coat tending to Blackness, something harder than the other, but yet easily scraped with a Knife, light, astringent, and not so brittle as the other; This much resembles burnt Ivory.

Another brown one I also have, but marked with black, white, and yellow Veins, running longitudinally; this is of the length of a Finger, weighing five Drams; it is brittle, sandy, like some kind of Wood, of an agreeable Smell, and strongly astringent: This also I judge to be of the better kind. So far *Wormius*.

This Fossil gives me Occasion to speak of a white Earth, which is found on the Side of the Seigniorie of *Moscau*, belonging to the Elector of *Saxony*, which the Inhabitants of the Place use to

make Bread, mixing it with Wheat or other Flour: It is also found at *Gironne* in *Catalonia*. It is this white Earth which is commonly called *Steinmark*, or *Medulla Saxorum*.

It is to be observed, that they do not use all this white Earth to make their Bread with, but only certain little Protuberances, white, and like Meal, which throw themselves out of that Earth when the Sun has heated it.

[This is the *Unicornu fossile*, *Boc. Mus.* 62. *Cornu fossile*, *Charlt.* 23. *Cornu fossile vulgo Monocerotis Cornu*, *Boet.* 425. *Ceratites*, *Ald. Mus.*

Met. 63. *Gens. Lap.* 154. *Ebur fossile*, *Clus.* *Exot.* 168. *Lapis Arabicus*, *Cæsalp.* 611. It is often dug up in the Form of Bones and Teeth, particularly of the *Dentes molares*, in which one may perfectly distinguish between the Root of these Teeth and that Part of them which was above the Gums; which makes it unquestionable, that they are really Petrifications. *Wormius* has very judiciously distinguished the Kinds of most Virtue, but at present none of them are used or kept in the Shops.



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